

Summer

Weeks	Learning Questions	Key Vocabulary	RTP (Ready To Progress)	
1-3	<u>Geometry: Shape</u> •Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles •Draw given angles, and measure them in degrees (°) (Y5) •Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles (Y5) •Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons •Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • Draw 2-D shapes using given dimensions and angles •Recognise, describe and build simple 3-D shapes, including making nets	Angle, acute, obtuse, reflex, right, protractor, polygon, faces, cube, irregular, regular, cuboid, quadrilateral, isosceles triangles, net, vertical opposite angles		
4	<u>Geometry: Position and Direction</u> •Describe positions on the full coordinate grid (all four quadrants) •Draw and translate simple shapes on the coordinate plane, and reflect them in the axes	y-axis, x-axis, left right, points, coordinates, translate, reflection, vertices, mirror lines, points		

Autumn

Weeks	Learning Questions	Key Vocabulary	RTP (Ready To Progress)	
1-2	<u>Place Value</u> - Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit - Solve number and practical problems that involve the above - Round any whole number to a required degree of accuracy - Solve number and practical problems that involve the above	number numeral zero one, two, three, twenty teens numbers, eleven, twelve, twenty twenty-one, twenty-two, one hundred, two hundred, one thousand, ten thousand, hundred thousand, million none, count, count (up) to, count on (from, to), count back (from, to) forwards backwards count in ones, twos, fives, tens, threes, fours, eights, fifties, sixes, sevens, nines, twenty-fives and so on to hundreds, thousands equal to equivalent to is the same as more, less most, least tally many odd, even multiple of, factor of factor pair sequence continue predict few pattern pair, rule relationship next, consecutive > greater than < less than, Ones, tens, hundreds, digit one-, two- or three-digit number, place, place value stands for, represents exchange the same number as, as many as more, larger, bigger, greater fewer, smaller, less fewest, smallest, least most, biggest, largest, greatest one more, ten more, one hundred more, one thousand more one less, ten less, one hundred less, one thousand less, equal to, compare, order, size, first, second, third, twentieth twenty-first, twenty-second ... last, last but one before, after next between	6NPV-2	Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.
			6NPV-3	Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.
3-7	<u>Addition, subtraction, multiplication and division</u> - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why - Solve problems involving addition, subtraction, multiplication and division - Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy - Identify common factors, common multiples and prime numbers - Multiply multi-digit numbers up to four digits by a 2-digit whole number using the formal written method of long multiplication - Perform mental calculations, including with mixed operations and large numbers - Divide numbers up to four digits by a 2-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context - Divide numbers up to four digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context - Use their knowledge of the order of operations to carry out calculations involving the four operations	Addition, add, more, and make, sum, total, altogether, double, near double half, halve one more, two more, ten more, one hundred more, subtract, take away, difference between, equals, is the same as, number bonds/pairs/facts, missing number, tens boundary, hundreds boundary, ones boundary, tenths boundary inverse	6AS/MD-1	Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).
			6AS/MD-2	Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.

8-9	<u>Fractions A</u> • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Compare and order fractions, including fractions > 1 • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • Identify common factors, common multiples and prime numbers • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • Solve problems involving addition, subtraction, multiplication and division	Equivalent, fraction, mixed number, numerator, denominator, equivalent, reduced to, cancel, equal part, equal grouping, equal sharing, parts of a whole half, two halves one of two equal parts quarter, two quarters, three quarters one of four equal parts one third, two thirds one of three equal parts sixths, sevenths, eighths, tenths, hundredths, thousandths decimal, decimal fraction, decimal point, decimal place, decimal equivalent proportion, in every, for every ratio percentage, per cent, % fraction, proper/improper fraction, approximately roughly just over, just under		
10-11	<u>Fractions B</u> • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams (Y5) • Multiply simple pairs of proper fractions, writing the answer in its simplest form • Divide proper fractions by whole numbers • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • Solve problems involving addition, subtraction, multiplication and division • Associate a fraction with division and calculate decimal fraction equivalents	Equivalent, fraction, mixed number, numerator, denominator, equivalent, reduced to, cancel, equal part, equal grouping, equal sharing, parts of a whole half, two halves one of two equal parts quarter, two quarters, three quarters one of four equal parts one third, two thirds one of three equal parts sixths, sevenths, eighths, tenths, hundredths, thousandths decimal, decimal fraction, decimal point, decimal place, decimal equivalent proportion, in every, for every ratio percentage, per cent, % fraction, proper/improper fraction, approximately roughly just over, just under	6F-1	Recognise when fractions can be simplified, and use common factors to simplify fractions.
			6F-2	Express fractions in a common denominator and use this to compare fractions that are similar in value.
			6F-3	Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denominator as a comparison strategy.
12	<u>Measurement</u> Converting units • Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate • Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places	Measure, measurement, size, compare, unit, standard unit, metric unit, imperial unit, measuring scale, division, guess, estimate, enough, not enough, too much, too little too many, too few nearly, close to, about the same as, full, empty, more than, less than, half full, quarter full, holds, contains container, measuring cylinder pint, gallon		

Spring

Weeks	Learning Outcome	Key Vocabulary	RTP (Ready To Progress)	
1-2	<u>Number: Ratio</u> - Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts - Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples - Solve problems involving similar shapes where the scale factor is known or can be found	ratio proportion “for every... there are...” part whole scale factor enlargement similar shapes length width perimeter	6AS/MD-3	Solve problems involving ratio relationships.
3-4	<u>Number: Algebra</u> - Use simple formulae - Generate and describe linear number sequences - Find pairs of numbers that satisfy an equation with two unknowns - Enumerate possibilities of combinations of two variables - Express missing number problems algebraically	term to term rule variable unknown expression equation formula one-step equation two-step equation substitution pairs of unknowns enumerate	6AS/MD-4	Solve problems with 2 unknowns.
			6AS/MD-1	Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).
			6AS/MD-2	Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.
5-6	<u>Number: Decimals</u> - Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places - Solve problems which require answers to be rounded to specified degrees of accuracy - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why - Multiply 1-digit numbers with up to 2 decimal places by whole numbers - Use written division methods in cases where the answer has up to 2 decimal places - Solve problems involving addition, subtraction, multiplication and division	decimal place decimal fraction recurring decimal equivalent fraction tenth sharing partitioning exchanging rounding to 3d.p. hundredth thousandth equal to remainder grouping		
	<u>Number: Fraction</u> - Use common factors to simplify fractions; use common multiples to express fractions in the same denomination - Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction - Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts - Compare and order fractions, including fractions >1 - Solve problems involving the calculation of percentages and the use of percentages for comparison	numerator denominator unit fraction non-unit fraction whole equivalent mixed number improper fraction simplest form multiple common denominator common numerator		

9-10	Measurement: Area, Perimeter and Volume • Recognise that shapes with the same areas can have different perimeters and vice versa • Recognise that shapes with the same areas can have different perimeters and vice versa • Recognise when it is possible to use formulae for area and volume of shapes • Calculate the area of parallelograms and triangles • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units	perimeter area volume cubic units (e.g. cm³) cuboid width length rectangle rectilinear parallelogram perpendicular height	6G-1	Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.
11-12	Statistics • Interpret and construct pie charts and line graphs and use these to solve problems • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs (Year 4) • Calculate and interpret the mean as an average	count, tally, sort, vote survey, questionnaire, data, database graph, block graph, pictogram represent group, set, list, table, chart, bar chart, frequency table, bar line chart Carroll diagram, Venn diagram line graph pie chart label, title, axis, axes diagram most popular, most common least popular, least common maximum/minimum value outcome mean (mode, median, range as estimates for this) statistics, distribution		