Year 5 Maths Medium Term Planning

Autumn 1		Autumn 2		
Number and Place Value (3 weeks)	**Addition and Subtraction (4 weeks)**	**Multiplication and Division (5 weeks)**	**Statistics (1 week)**	**Consolidation (1 week)**
• read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0 • round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 • solve number problems and practical problems that involve all of the above	• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • add and subtract numbers mentally with increasingly large numbers • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	• identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • establish whether a number up to 100 is prime and recall prime numbers up to 19 • multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • multiply and divide numbers mentally, drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 • recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) • solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes	• solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables, including timetables	

Year 5 Maths Medium Term Planning

		• solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates		
Vocabulary: 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 how many …? 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 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 before, after next between halfway between above, below Estimating guess how many …? estimate nearly roughly close to approximate, approximately about the same as just over, just under exact, exactly too many, too few enough, not enough round, nearest, round to the nearest ten, hundred, thousand, ten	Vocabulary: addition add, more, and make, sum, total altogether double near double half, halve one more, two more … ten more … one hundred more how many more to make …? how many more is … than …? how much more is …? subtract take away how many are left/left over? how many have gone? one less, two less, ten less … one hundred less how many fewer is … than …? how much less is …? difference between equals is the same as number bonds/pairs/facts missing number tens boundary, hundreds boundary, ones boundary, tenths boundary inverse	Vocabulary: multiplication multiply multiplied by multiple, factor groups of times product once, twice, three times … ten times repeated addition division dividing, divide, divided by, divided into left, left over, remainder grouping sharing, share, share equally one each, two each, three each … ten each group in pairs, threes … tens equal groups of doubling halving array row, column number patterns multiplication table multiplication fact, division fact inverse square, squared cube, cubed	Vocabulary: 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 label, title, axis, axes diagram most popular, most common least popular, least common maximum/minimum value outcome	

Year 5 Maths Medium Term Planning

thousand round up, round down				
Spring 1		Spring 2		
Fractions (5 weeks)	**Decimals and Percentages (3 weeks)**	**Geometry: Angles/Squares/Rectangles/Polygons (4 weeks)**	**Geometry: Position and Movement/Direction**	

• compare and order fractions whose denominators are all multiples of the same number
• identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
• recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
• add and subtract fractions with the same denominator, and denominators that are multiples of the same number
• multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
	• read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$]
	• recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
	• round decimals with 2 decimal places to the nearest whole number and to 1 decimal place
	• read, write, order and compare numbers with up to 3 decimal places
	• solve problems involving number up to 3 decimal places
	• recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction
	• solve problems which
		• identify 3-D shapes, including cubes and other cuboids, from 2-D representations
		• know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
		• draw given angles, and measure them in degrees (°)
		• identify:
		  • angles at a point and 1 whole turn (total 360°)
		  • angles at a point on a straight line and half a turn (total 180°)
		  • other multiples of 90°
		  • use the properties of rectangles to deduce related facts and find missing lengths and angles
		  • distinguish between regular and irregular polygons based on reasoning about equal sides and angles
			• identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	

Year 5 Maths Medium Term Planning

	require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25		
Vocabulary: fraction, proper/improper fraction 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	Vocabulary: hundredths, thousandths decimal, decimal fraction, decimal point, decimal place, decimal equivalent proportion, in every, for every percentage, per cent, %	Vocabulary: shape, pattern polygon right -angled parallel, 3-D shape 3-D, three-dimensional face, edge, vertex, vertices cube, cuboid pyramid sphere, hemisphere, spherical cone cylinder, cylindrical prism, triangular prism tetrahedron, polyhedron octahedron 2-D shape 2-D, two-dimensional corner, side point, pointed rectangle (including square), rectangular, oblong rectilinear circle, circular triangle, triangular equilateral triangle, isosceles triangle, scalene triangle pentagon, pentagonal hexagon, hexagonal heptagon octagon, octagonal quadrilateral parallelogram, rhombus, trapezium	Vocabulary: position over, under, underneath above, below top, bottom, side on, in outside, inside around in front, behind front, back beside, next to opposite apart between middle, edge centre corner direction journey, route left, right up, down, perpendicular x-axis, y-axis, quadrant higher, lower forwards, backwards, sideways across next to, close, near, far along through to, from, towards, away from clockwise, anticlockwise compass point north, south, east, west, N, S, E, W north-east, north-west, south-east, south-west, NE, NW, SE, SW horizontal, vertical, diagonal translate, translation coordinate movement slide roll turn stretch, bend whole turn, half turn, quarter turn, three-quarter turn rotate, rotation angle, is a greater/smaller

Summer 1		Summer 2		
Measurements: Converting Units of Length/Mass/Time	**Measurement: Area and Perimeter (3 weeks)**	**Measurement: Volume (2 weeks)**	**Roman Numerals**	**Consolidation**
• convert between different units of metric measure	• calculate and compare the area of	• estimate volume [for	• read Roman	

Year 5 Maths Medium Term Planning

[for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] • understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] • solve problems involving converting between units of time solve problems involving converting between units of time • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	rectangles (including squares), including using standard units, square centimetres (cm²) and square metres (m²), and estimate the area of irregular shapes • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm²) and square metres (m²), and estimate the area of irregular shapes	example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	numerals to 1,000 (M) and recognise years written in Roman numerals	
Vocabulary: 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, approximately roughly just over, just under **Length** millimetre, centimetre, metre, kilometre, mile length, height, width, depth, breadth long, short, tall high, low wide, narrow thick, thin longer, shorter, taller, higher … and so on longest, shortest, tallest, highest … and so on far, further, furthest, near, close distance apart … between … to … from edge, perimeter area, covers square centimetre (cm2), square metre (m2), square millimetre (mm2) ruler metre stick, tape measure	Vocabulary: millimetre, centimetre, metre, kilometre, mile length, height, width, depth, breadth long, apart … between … to … from edge, perimeter area, covers square centimetre (cm2), square metre (m2), square millimetre (mm2) ruler metre stick, tape measure	Vocabulary: litre, half litre, millilitre capacity volume full empty more than less than half full quarter full holds, contains container, measuring cylinder pint, gallon	Vocabulary Roman numerals I V X C L D M I II III IV V VI VII VIII IX X	

Year 5 Maths Medium Term Planning

Weight mass: big, bigger, small, smaller weight: heavy/light, heavier/lighter, heaviest/ lightest kilogram, half kilogram, gram weigh, weighs, balances heavy, light heavier than, lighter than heaviest, lightest scales **Capacity and volume** litre, half litre, millilitre capacity volume full empty more than less than half full, quarter full holds, contains container, measuring cylinder pint, gallon **Temperature** Temperature, degree, centigrade **Time** time days of the week, Monday, Tuesday … months of the year (January, February …) seasons: spring, summer, autumn, winter day, week, weekend, fortnight, month, year, leap year, century, millennium birthday, holiday morning, afternoon, evening, night bedtime, dinner time, playtime today, yesterday, tomorrow before, after, earlier, later next, first, last, noon, midnight calendar, date, date of birth now, soon, early, late, earliest, latest quick, quicker, quickest, quickly slow, slower, slowest, slowly old, older, oldest new, newer, newest				

Year 5 Maths Medium Term Planning

takes longer, takes less time, how long ago?				

Year 5 Maths Medium Term Planning