Year 2/3/4/5/6/7 Autumn Medium Term Plan

Topic	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Number Concepts	Order numbers to 100, compare two numbers, say which is more or less Say a number between any given neighbouring pairs of multiples of ten (e.g. 40 and 50)	Locate numbers on a landmarked 0-1000 line Understand place value of three digit numbers Partition and recombine 2 and 3 digit numbers Order 2- and 3-digit numbers Find 1, 10, 100 more/less than three-digit numbers	Locate 3- and 4-digit numbers landmarked lines (1000s labelled) Understand what each digit represents in a 3- or 4-digit number Find 1, 10, 100, 1000 more/less than four-digit numbers	Order a set of numbers up to 1 million Know what each digit represents in five- and six-digit numbers	Understand what each digit represents in a numbers with up to two decimal places Order numbers with up to three decimal places (including different numbers of places) and place them on a number line	Understand and use decimal notation and place value; multiply and divide integers and decimals by 10, 100, 1000, and explain the effect. Use decimal notation for tenths and hundredths, know what each digit represents in numbers with up to two decimal places. Compare and order decimals in different contexts; know that when comparing measurements they must be in the same units. Understand negative numbers as positions on a number line; order, add and subtract positive and negative integers in context.
Addition	Relate counting on/back in tens to finding 20 more/less Find change from 20p Use pairs to ten to find the complement to the next multiple of ten Find a difference using number facts to help	Add any pair of two-digit numbers (totals less than 100) by partitioning and recombining	Begin to use expanded vertical addition to add pairs of three-digit numbers (not crossing 10s, 100s or 1000), and then those where the ones digits total more than 10 Derive quickly pairs of two-digit numbers with a total of 100, e.g. 72 + □ = 100.	Use strategies to add/subtract pairs of two-digit numbers and to add/subtract three-digit numbers, e.g. 420 + 250, 740 – 210 Use expanded vertical addition to add any pair of three-digit numbers, including amounts of money	Revise adding two numbers with the same number of decimal places using vertical addition, including amounts of money, e.g. £35.75 + £26.78	Consolidate the rapid recall of number facts, including positive integer complements to 100 Make and justify estimates and approximations of calculations. Use standard procedures to add whole numbers and decimals with up to two places. Enter numbers and interpret the display in different contexts (decimals, money). Solve word problems and investigate in a range of contexts: number; compare and evaluate solutions.

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Subtraction		Find a difference, revise ones either side of a multiple of ten, e.g. 42 – 28, draw own Empty Number Line	Use complements to 100 to find differences between two- and three-digit numbers, e.g. 137 – 72	Find a difference between any pair of three-digit numbers (including amounts of money), e.g. 524 – 286 using the empty number line	Revise subtracting four digit numbers by counting up/finding the difference, e.g. 5431 – 2789	Consolidate the rapid recall of number facts, including positive integer complements to 100 Make and justify estimates and approximations of calculations. Use standard procedures to subtract whole numbers and decimals with up to two places. Enter numbers and interpret the display in different contexts (decimals, money). Solve word problems and investigate in a range of contexts: number; compare and evaluate solutions.
Shape	Visualise common 2-d solids, identify from pictures in different positions and orientations Sort & describe 2-d shapes, referring to their properties Visualise common 3-d solids, identify from pictures in different positions and orientations Sort and describe 3-d shapes, referring to their properties	Know properties of 2-d shapes; describe, visualise, classify and draw and make the shapes Draw and complete 2-d shapes with reflective symmetry; draw the reflection of a shape in a mirror line along one side	Recognising and understanding properties of 2-d shapes Draw polygons and classify them, identify their properties including line symmetry, right angles and whether they are regular or not	Use knowledge of properties to draw 2-D shapes Classify triangles (isosceles, equilateral, scalene) using criteria such as equal sides, equal angles and lines of symmetry	Describe, identify and visualise parallel and perpendicular edges or faces Use the properties of 2D and 3D shapes to classify 2-D shapes and 3-D solids Visualise 3-D shapes from 2-D drawings and identify different nets for a closed cube Use Venn and Carroll diagrams to show information about shapes Sort and classify quadrilaterals using criteria such as parallel sides, equal sides, equal angles and lines of symmetry Make and draw shapes with increasing accuracy	Use 2-D representations to visualise 3-D shapes and deduce some of their properties

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Multiplication	Use multiplication and division sentences to describe an array and repeated hops on a number line	Understand the relationship between multiplication and division and write the division fact to go with a multiplication fact Understand how multiplication is commutative eg 2 x 6 = 6 x 2	Begin to multiply two-digit numbers by single digit numbers e.g. 24 × 3	Begin to use the grid method to multiply three-digit numbers by single-digit numbers	Revise using the grid method to multiply three-digit numbers by single-digit numbers and to multiply two-digit numbers by two-digit numbers Use the grid method to multiply 3 digit by 1 digit,4 digit numbers by 1 digit and 2 digit by 2 digits	Consolidate the rapid recall of multiplication facts to 10 × 10, and quickly derive associated division facts. Make and justify estimates and approximations of calculations. Solve word problems and investigate in a range of contexts: number; compare and evaluate solutions.
Division		Understand that division can leave a remainder Find half of odd and even numbers to 40, using notation such as $13\frac{1}{2}$	Divide two-digit numbers by single-digit numbers, using chunking, e.g. 39 ÷ 3	Use chunking to divide two- and three-digit numbers by single-digit numbers, including those leaving a remainder	Give an answer to a division as a mixed number, e.g. 39 ÷ 4 = $9\frac{3}{4}$ Using chunking to divide three-digit numbers by single digit numbers, including those leaving a remainder	

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Fractions, Decimals, Percentages, Ratio and Proportion	Find halves and quarters of shapes by folding Recognise which shapes are divided in halve/quarters and which are not	Understand and use fraction notation Find $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, 1/3 and 2/3 of shapes, strips of objects and numbered strips Recognise equivalence between $\frac{1}{2}$ and 2/4 by folding shapes and using diagrams	Find tenths, fifths and eighths, then several tenths, fifths and eighths of shapes, strips and sets of objects Use diagrams to identify simple equivalent fractions, to compare fifths and tenths, halves, quarters and eighths, and to find two fractions with a total of 1, e.g. 1/8 and 7/8 or 1/5 and 4/5 Begin to relate finding unit fractions to division and use to find $\frac{1}{2}$, 1/3, $\frac{1}{4}$, 1/5 or 1/10 of multiples of 2, 3, 4, 5 or 10	Recognise equivalence between 1/4s and 1/8s, 1/3s and 1/6s, 1/5s and 1/10s Relate finding unit fractions to division and use to find fractions of two-digit numbers Order mixed numbers on a number line Change an improper fraction to a mixed number, e.g. 7/4 to $1\frac{3}{4}$ Use fractions to describe a proportion, e.g. 1/5 of the beads are yellow	Revise finding fractions of shapes Change an improper fraction to a mixed number, e.g. 33/8 to 4 1/8 Recognise equivalence between fractions e.g. between 1/16s, 1/8s, 1/4s and 1/2s; and between 1/100s, 1/10s and 1/2s Reduce a fraction to its simplest form Relate finding fractions to division and use them as operators to find fractions including several tenths and hundredths of quantities Understand percentage as the number of parts in every 100, and express halves, quarters, tenths and hundredths as percentages Find simple percentages of whole number quantities e.g. 10%, 20%, 40% and 80 % by doubling, and 25% by finding a quarter Revise using ratio and proportion to describe the relationship between quantities, e.g. 3 red beads for every 2 blue beads, 3 out of every 5 beads are red Solve simple problems involving direct proportion by scaling quantities up or down	Use fraction notation, including mixed numbers, and vocabulary numerator and denominator. Change an improper fraction to a mixed number. Recognise simple equivalent fractions, including tenths and hundredths. Begin to understand percentage as the number of parts in every 100. Use vocabulary and ideas of probability, drawing on experience. Understand and use the probability scale from 0 to 1; find and justify probabilities based on equally likely outcomes in simple contexts; identify all the possible mutually exclusive outcomes of a single event.

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Measures	Estimate, measure and compare lengths, choosing and using suitable standard units and suitable measuring instruments	Know the relationship between kilometres and metres, metres and centimetres, and choose and use appropriate units to estimate, measure and record measurements	Interpret intervals and divisions on partially numbered scales and record readings accurately Choose and use standard metric units and their abbreviations when estimating, measuring and recording length Know the meaning of 'kilo', 'centi' and 'milli' Where appropriate, use decimal notation to record measurements (e.g. 1.3 m)	Draw lines to nearest centimetre and millimetre Measure lines to nearest millimetre and centimetre Measure and calculate the perimeter of regular and irregular polygons Use the formula for the area of a rectangle to calculate the rectangle's area	Measure and calculate the perimeter of rectilinear shapes Measure and calculate the area of rectilinear shapes Estimate the area of an irregular shape by counting squares Calculate the perimeter of simple compound shapes that can be split into rectangles Calculate the area of simple compound shapes that can be split into rectangles	Use names and abbreviations of units of measurement to measure, estimate, calculate and solve problems in everyday contexts involving length, area. Know and use the formula for the area of a rectangle; calculate the perimeter and area of shapes made from rectangles Calculate the surface area of cubes and cuboids. Solve word problems and investigate in a range of contexts: length, perimeter and area.

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Data Handling	Answer a question by collecting & recording data, and representing it as block graphs and pictograms to show results Use lists, tables and diagrams to sort objects; explain choices using appropriate language, including 'not'	Answer a question by collecting, organising, interpreting data Use tally charts, frequency tables, pictograms and bar charts to represent results and illustrate observations	Answer a question by identifying what data to collect Organise, present, analyse and interpret data in tables, diagrams, tally charts, using ICT as appropriate Organise, present, analyse and interpret data in pictograms and bar charts, using ICT as appropriate	Construct and interpret frequency tables, pictograms and bar line charts, vertical axes labelled in multiples of 2s, 5s or 10s	Solve problems by collecting, selecting, processing, presenting and interpreting data, using ICT where appropriate; draw conclusions and identify further questions to ask Construct and interpret frequency tables, bar charts with grouped discrete data, and line graphs Interpret pie charts	Calculate statistics for small sets of discrete data: Find the mode, median and range, and the modal class for grouped data; Calculate the mean, including from a simple frequency table, using a calculator for a larger number of items. Interpret diagrams and graphs (including pie charts), and draw conclusions based on the shape of graphs and simple statistics for a single distribution. Collect data from a simple experiment and record in a frequency table; estimate probabilities based on this data.

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Time (Y4) and Angles (Y56)	Read the time to the quarter of an hour on digital and analogue clocks Begin to identify time intervals, including those that cross the hour Use units of time (seconds, minutes, hours, days and weeks) and know the relationships between them	Use units of time and know the relationships between them (second, minute, hour, day, week, month, year) Suggest suitable units to measure time Read a calendar Calculate time intervals in weeks or days Read the time on a 12-hour digital clock and to the nearest 5 minutes on an analogue clock Begin to calculate time intervals in hours and minutes	Read the time to nearest minute on digital and analogue clocks Use am, pm and 12-hour clock notation Choose units of time to measure time intervals	Estimate, draw and measure acute and obtuse angles using a protractor Calculate angles in a straight line	Estimate angles and use a protractor to measure these Draw angles, using a protractor, on their own and in shapes Calculate angles on a straight line, in a triangle or around a point	Use correctly the vocabulary, notation and labelling conventions for lines, angles and shapes. Identify parallel and perpendicular lines; know the sum of angles at a point, on a straight line and in a triangle and recognise vertically opposite angles. Begin to identify and use angle, side and symmetry properties of triangles and quadrilaterals. Use conventions and notation for 2-D coordinates in all four quadrants; find coordinates of points determined by geometric information. Use angle measure; distinguish between and estimate the size of acute, obtuse and reflex angles

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Algebra (Year 7 only)						Generate and describe simple integer sequences. Generate terms of a simple sequence, given a rul position in the sequence). Generate sequences from practical contexts and Express simple functions in words, then using sy Use letter symbols to represent unknown numbe equation Suggest extensions to problems by asking 'What example. Understand that algebraic operations follow the Simplify linear algebraic expressions by collectir coefficients). Use simple formulae from mathematics and othe formulae and, in simple cases, derive a formula. Identify the necessary information to solve a pr words, diagrams and tables