KS2 Maths medium term plan Autumn 2

Unit	Year 3	
Multiplication and division (2 weeks)	write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	
Small steps	Multiples of 10 Related calculations Reasoning about multiplication Multiply a 2-digit number by a 1-digit number – no exchange Multiply a 2-digit number by a 1-digit number – with exchange Link multiplication and division	Divide a 2-digit number by a 1-digit number – no exchange Divide a 2-digit number by a 1-digit number – flexible partitioning Divide a 2-digit number by a 1-digit number – with remainders Scaling How many ways?
Vocabulary and resources	Arrays, backwards, bar model, columns, consecutive, divide, double, equal, forwards, grouped, groups, half, inverse, multiplication,, multiply, number line, parts, repeated addition, rows, shared, times, Venn diagram	Counters, number lines, number tracks, multiplication squares, multliink, place value counters, base 10
Length and perimeter (3 weeks)	measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) measure the perimeter of simple 2-D shapes	
Small steps	Measure in metres and centimetres Measure in millimetres Measure in centimetres and millimetres Metres, centimetres and millimetres Equivalent lengths (metres and centimetres) Equivalent lengths (centimetres and millimetres)	Compare lengths Add lengths Subtract lengths What is perimeter? Measure perimeter Calculate perimeter
Vocabulary and resources	Centimetres, metres, measure, measurement, length, intervals, more, less, millimetres, longer, shorter, equivalent, partition, equal, compare, unit, convert, perimeter, sides	Rulers, measuring tapes, multilink, 2d shapes, geoboards

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Unit	Year 4	
Perimeter and length (3 weeks)	convert between different units of measure [for example, kilometre to metre; hour to minute] measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares	
Small steps	What is area? Count squares Make shapes Compare areas Measure in kilometres and metres Equivalent lengths (kilometres and metres) Perimeter on a grid	Perimeter of a rectangle Perimeter of rectilinear shapes Find missing lengths in rectilinear shapes Calculate perimeter of rectilinear shapes Perimeter of regular polygons Perimeter of polygons
Vocabulary and resources	Unit, measure, measurement, kilometre, metre, length, greater, less, equivalent, perimeter, side, calculate, rectangle, rectilinear, equal, calculation, missing, add, subtract, unknown, polygon, regular, irregular, area, surface, 2d shape, array, compare	2d shapes, geoboards, rulers,
Fractions (2 weeks)	count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 round decimals with 1 decimal place to the nearest whole number compare numbers with the same number of decimal places up to 2 decimal places recognise and write decimal equivalents of any number of tenths or hundreds recognise and write decimal equivalents to $\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number	
Small steps	Understand the whole Count beyond 1 Partition a mixed number Number lines with mixed numbers Compare and order mixed numbers Understand improper fractions Convert mixed numbers to improper fractions Convert improper fractions to mixed numbers	Equivalent fractions on a number line Equivalent fraction families Add two or more fractions Add fractions and mixed numbers Subtract two fractions Subtract from whole amounts Subtract from mixed numbers
Vocabulary and resources	Whole, parts, equal, numerator, denominator, mixed number, partition, interval, greater, less, compare, order, integer, improper, remainder, equivalent	Shapes, fraction pies/walls, Multilink

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Unit	Year 5	
Perimeter, area and volume (3 weeks)	measure and calculate the perimeter of composite rectilinear shapes in cm and m calculate and compare the area of rectangles (including squares), including using standard units cm^2 and m^2, and estimate the area of irregular shapes estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	
Small steps	Perimeter of rectangles Perimeter of rectilinear shapes Perimeter of polygons Area of rectangles Area of compound shapes Estimate area	
Vocabulary and resources	Perimeter, rectangle, length, centimetre, side, width, rectilinear, properties, regular, irregular, area, greater, less, calculate, compound, estimate, approximate, volume, cubic centimetres, unit, capacity, millilitre, litre,	2d shapes, geoboards, 3d shapes, cubes,
Fractions (2 weeks)	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	
Small steps	Find fractions equivalent to a unit fraction Find fractions equivalent to a non-unit fraction Recognise equivalent fractions Convert improper fractions to mixed numbers Convert mixed numbers to improper fractions Compare fractions less than 1 Order fractions less than 1 Compare and order fractions greater than 1	Add and subtract fractions with the same denominator Add fractions within 1 Add fractions with total greater than 1 Add to a mixed number Add two mixed numbers Subtract fractions Subtract from a mixed number Subtract from a mixed number – breaking the whole
Vocabulary and resources	Whole, parts, equal, numerator, denominator, mixed number, partition, interval, greater, less, compare, order, integer, improper, remainder, equivalent, unit, non unit, multiply, divide, factors, conversion, common denominator, reduce	Shapes, fraction pies/walls, cubes,

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Unit	Year 6	
Area, perimeter and volume (3 weeks)	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 (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]	
Small steps	Shapes – same area Area and perimeter Area of a triangle – counting squares Area of a right-angled triangle	Area of any triangle Area of a parallelogram Volume – counting cubes Volume of a cuboid
Vocabulary and resources	Area, factor pairs, length, width, perimeter, formula, approximate, accurate, perpendicular, base, parallelogram, volume, cubic centimetres	2d shapes, geoboards, 3d shapes, cubes,
Fractions (2 weeks)	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	
Small steps	Equivalent fractions and simplifying Equivalent fractions on a number line Compare and order (denominator) Compare and order (numerator) Add and subtract simple fractions	Add and subtract any two fractions Add mixed numbers Subtract mixed numbers Multi-step problems
Vocabulary and resources	Whole, parts, equal, numerator, denominator, mixed number, partition, interval, greater, less, compare, order, integer, improper, remainder, equivalent, unit, non unit, multiply, divide, factors, conversion, common denominator, reduce, simplify, simplest form, multiple	Shapes, fraction pies/walls,