Year 5 Moving into Year 6

Long Term and Medium Term Planning

Year 6: Overview of the year

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5 5 Geometry Area and volume of shapes	1 Geometry 2D and 3D shape	1 Measurement Length, perimeter, mass	3 Multiplication & Division	1 Statistics (line graphs and pie charts)	6 Measurements
Year 5 4 Fractions	2 Addition & Subtraction	2 Measurement Area and volume	4 Multiplication & Division	3 Place value	2 Algebra
Year 5 Measure Year 5 4 Measures Time	2 Multiplication & Division	2 Place value	1 Addition, subtraction, multiplication and division	3 Addition & Subtraction	4 Addition & Subtraction
1 Place value, including decimals	1 Fractions.	3 Geometry	1 Ratio and proportion	4 Fractions	5 Fractions
1 Addition & Subtraction	2 Fractions, percentages, decimals and fractions	3 Measurement	4 Geometry	5 Geometry	2 Statistics
1 Multiplication & Division	2 Geometry Angles	3 Fractions	5 Measurement	1 Algebra	6 Geometry

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YEAR 6 : AUTUMN 1: Maths Meetings and Mental Maths

WEEK 1 – Year 5	WEEK 2 – Year 5	WEEK 3 – Year 5	WEEK 4 – Year 5	WEEK 5 – Year 5	WEEK 6 – Year 6
4 Place Value	**4 Addition & Subtraction**	**6 Multiplication & Division**	**5 Place Value**	**5 Addition & Subtraction**	**1 Place Value**
Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Recognise and use square numbers and cube numbers, and the notation for square^2 and cubed^3.	Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10000 or 100000	Consolidate Addition and Subtraction using columnar addition and subtraction	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.
➢ Revise reading and writing numbers to 1000 ➢ Read all numbers from 1000 to 50,000 in numerals ➢ Read all numbers from 1000 to 1,000,000 in numerals ➢ Recognise the value of each digit up to 1,000,000 ➢ Know and use the terms: ones, tens, hundreds, ten thousands, hundred thousand and million correctly ➢ Partition any number up to 1,000,000 showing the value of each digit	➢ Identify the number of steps in a problem ➢ Identify the operations to be used ➢ Solve problems and check accuracy using estimation and rounding to check reasonableness of answer	➢ Know, by heart, the square of all numbers between 2 and 12. ➢ Know why a square number is called a square number by drawing squares ➢ Use the symbol ^{2} accurately. ➢ Explain the relationship between the square of a number and the square root of a number. ➢ Knowing the square of a number, use the inverse to calculate the square root. ➢ Use the symbol ^{3} accurately.	➢ Round any number up to 10,000 to the nearest 10 ➢ Round any number up to 10,000 to the nearest 100 ➢ Round any number up to 10,000 to the nearest 1,000 ➢ Round any number up to 100,000 to the nearest 10 ➢ Round any number up to 100,000 to the nearest 100 ➢ Round any number up to 100,000 to the nearest 1,000 ➢ Round any number up to 100,000 to the nearest 10,000 ➢ Round any number up to 1,000,000 to the nearest 10 ➢ Round any number up to 1,000,000 to the nearest 100 ➢ Round any number up to 1,000,000 to the nearest 1,000 ➢ Round any number up to 1,000,000 to the nearest 10,000 ➢ Round any number up to 1,000,000 to the nearest 100,000	Revise: ➢ Adding numbers with up to 5-digits with no exchanging ➢ Adding numbers with up to 5-digits with exchanging ➢ Subtracting numbers with up to 5-digits with no exchanging ➢ Subtracting numbers with up to 5-digits with exchanging	➢ Revise reading and writing numbers up to 1,000,000 ➢ Read numbers up to 10,000,000 in numerals ➢ Write numbers up to 10,000,000 in numerals ➢ Recognise the value of each digit up to 10,000,000 ➢ Know and use the terms: ones, tens, hundreds, ten thousands, hundred thousand, million and ten million correctly ➢ Partition any number up to 10,000,000 showing the value of each digit

YEAR 5 : SUMMER 1: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
5 Geometry	**3 Fractions**	**5 Measures**	**1 Place Value**	**1 Four Rules**	**1 Multiplication & Division**
Year 5 learning associated with geometry to include work on angles, translations and shape.	Compare and order fractions whose denominators are all multiples of the same number.	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.	-Perform mental calculations, including with mixed operations and large numbers. -Use knowledge of the order of operations to carry out calculations involving the four operations.	Identify common factors, common multiples and prime numbers.
➢ Reflecting a shape and re-plot ➢ Translating a shape and re-plot ➢ Describing the properties of the reflected and/or translated shape – evidencing that the shape and size has not changed	➢ Compare and order fractions with the same denominator and common denominators. ➢ Convert fractions with different denominators to have a common denominator. ➢ Order more than two different fractions with different denominators that are multiples of the same number.	➢ Know the approximate number of metres in 1 mile ➢ Know the approximate relationship between inches and cm ➢ Know the approximate relationship between a pound and a gram ➢ Know the approximate relationship between a pint and a litre ➢ Carry out a range of approximate conversion calculations using above	➢ Revise reading and writing numbers up to 1,000,000 ➢ Read numbers up to 10,000,000 in numerals ➢ Write numbers up to 10,000,000 in numerals ➢ Recognise the value of each digit up to 10,000,000 ➢ Know and use the terms: ones, tens, hundreds, ten thousands, hundred thousand, million and ten million correctly ➢ Partition any number up to 10,000,000 showing the value of each digit	Mentally: ➢ Use all 4 operations ➢ Calculate a problem using at least 2 operations ➢ Calculate 2-step problems ➢ Explain the order to solve calculations ➢ Solve calculations in correct order	➢ Know the common factors of any two given numbers ➢ Know the common multiples of any two given numbers ➢ Know all prime numbers.
4 Measures Time (Week 3) Solve problems involving converting between units of time. ➢ Solve a range of problems involving all units of time					

YEAR 6: AUTUMN 2: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
1 Geometry	**1 Addition & Subtraction**	**2 Multiplication & Division**	**1 Fractions**	**2 Fractions Percentages**	**2 Geometry**
Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.	Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Perform mental calculations, including mixed numbers and large numbers.	Compare and order fractions, including fractions >1. Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.	Recall and use equivalences between simple fractions, decimals and percentages, including different contexts	Draw 2D shapes using given dimensions and angles.
➢ Classify triangles in terms of their properties ➢ Know that an equilateral triangle has three angles of 60° and three equal sides ➢ Know that an isosceles triangle has two sides which are equal and two angles which are equal ➢ Describe a right angled triangle according to its properties ➢ Know that angles in a triangle always total 180° ➢ Describe a square and a rectangle according to their properties ➢ Know the properties of: parallelogram, rhombus and trapezium ➢ Know that interior angles in a quadrilateral total 360° ➢ Accurately measure angles in any shape ➢ Accurately calculate missing angles in triangles and quadrilaterals on a line and at a point ➢ Sort and classify shapes according to similarities and differences	➢ Explain why an answer is or is not reasonable using estimation and rounding. ➢ Estimate an answer to a problem before calculating (being able to justify estimation).	➢ Use a range of numbers to multiply and divide.	➢ Order fractions in ascending and descending order. ➢ Simplify fractions	➢ Revise that 1/10 can be represented as 0.1 and use this to solve problems. ➢ Revise that ¼, ¾ can be represented as 0.25 or 0.75 and use this to solve problems. ➢ Revise all the decimal equivalent fractional values where the denominator is 3, 4, 5, 6, 8 or 10 and use to solve problems. ➢ Link this to percentages so that pupils can move between equivalent fractions, decimals and percentages	➢ Draw a square accurately having been given the length of a side ➢ Draw a rectangle accurately having been given the length and breadth ➢ Draw an equilateral triangle accurately having been given the length of a side ➢ Draw an isosceles triangle accurately having been given the length of the base ➢ Draw a triangle to a given set of angles and sides ➢ Draw pentagons and hexagons to given criteria

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YEAR 6: Spring 1: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
1 Measures	**2 Measures**	**2 Place Value**	**3 Geometry**	**3 Measures**	**3 Fractions**
-Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm^3 and m^3, and extending to other units such as mm^3 and km^3. -Convert between miles & km.	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 three decimal places.	Use negative numbers in context and calculate intervals across zero	- 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	Solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate.	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
➢ Estimate volume of shapes and check for accuracy ➢ Know the formula for converting m:km ➢ Use the formula to calculate distances ➢ Use a conversion graph	➢ Use, add and subtract positive and negative integers for measures such as temperature and money ➢ Convert large numbers of cm into m; ml into l; g into kg; minutes into hours	➢ Interpret intervals and differences in context, e.g. temperature ➢ Calculate intervals from -100 to 100	➢ Read coordinates in all four quadrants ➢ Plot points using coordinates in all four quadrants ➢ Create shapes by plotting points in all four quadrants ➢ Use four quadrants of the grid to draw different shapes ➢ Reflect a shape in any of the axes and re-plot ➢ Translate a shape into any of the quadrants or across quadrants	➢ Use decimal notation to 3dp to solve calculations with measures ➢ Use other compound units for speed such as miles per hour and apply knowledge in science	➢ Work out the common denominator for a pair of fractions with different denominators. ➢ Add two fractions with different denominators. ➢ Add more than two fractions with different denominators. ➢ Subtract one fraction from another with different denominators. ➢ Subtract one mixed number from another where there are different denominators.

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YEAR 6: Spring 2: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
3 Multiplication & Division	**4 Multiplication & Division**	**2 Addition & Subtraction**	**1 Ratio & Proportion**	**4 Geometry**	**4 Measures**
Multiply multi-digit numbers up to 4-digits by a 2-digit whole number using the formal written method of long multiplication.	-Divide numbers up to 4-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. - Divide numbers up to 4-digits by a 2-digit number using the formal written method of short division, where appropriate, interpreting remainders according to the context.	Use knowledge of the order of operations to carry out calculations involving the four operations.	-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 the calculation of percentages of whole numbers or measures such as 15% of 360 and the use of percentages for comparison.	Recognise, describe and build simple 3D shapes, including making nets.	Recognise when it is possible to use the formulae for area & volume of shapes.
➢ Use formal method of multiplication of ThHTU x TU	➢ Divide any number with 4-digits by a 2-digit number without a remainder. ➢ Divide any number with 4-digits by a 2-digit number with a remainder. ➢ Use rounding to express answers as whole numbers. ➢ Know when an answer has to be a whole number and a remainder is not appropriate. ➢ Use a formal method to divide any number with 4-digits by a 2-digit number without a remainder. ➢ Use a formal method to divide any number with 4-digits by a 2-digit number with a remainder.	➢ Explain the order to solve calculations ➢ Solve calculations in correct order	➢ Understand that quantities change at the same rate. ➢ Find equivalent ratios. ➢ Solve problems involving similar shapes or quantities where the scale factor is known or can be found. ➢ Recognise 50% as being half of original value. ➢ Recognise 25% as being quarter of original value. ➢ Recognise 75% as being three-quarters of original value. ➢ Recognise 10% as being one-tenth of original value. ➢ Know that to find 1% you divide by 100 ➢ Find 25%, 50%, 75% of any given value ➢ Find 5%, 10%, 20%, 50% etc. of a given value. ➢ Find % of a given value.	➢ Know what the net for a cube looks like ➢ Create a cube from a net ➢ Make a net to create a cube ➢ Know what the net for a cuboid looks like ➢ Create a cuboid from a net ➢ Make a net to create a cuboid ➢ Make a net to create a square based pyramid ➢ Make a net to create a triangular based pyramid	➢ Know when to apply a given formula to find the area of a shape ➢ Know when to apply a given formula to find the volume of a shape

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YEAR 6: Spring 2: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
1 Statistics	**3 Place Value**	**3 Addition & Subtraction**	**4 Fractions**	**5 Geometry**	**1 Algebra**
Interpret and construct: - pie charts - line graphs and use these to solve problems	Round any whole number to the required degree of accuracy	Consolidate all learning in relation to the four operations using formal efficient methods at all times	Multiply simple pairs of proper fractions, writing the answer in the simplest form.	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	-Express missing number problems algebraically. -Use simple formulae. -Generate and describe linear number sequences.
➢ Know what a pie chart is ➢ Read a simple pie chart with segments that are divisible by 10 ➢ Use information from pie chart to solve a problem ➢ Construct a pie chart from a set of given information with data in multiples of 6 or 12 ➢ Use knowledge of angles to measure segments of pie charts accurately ➢ Interpret information from line graphs to answer questions ➢ Know how to read scales on line graphs ➢ Draw own line graphs with range of scales	➢ Round any 4 digit number to the nearest 1000 ➢ Round any 5 digit number to the nearest 10,000 ➢ Round any 6 digit number to the nearest 100,000 ➢ Round any 7 digit number to the nearest 1,000,000	➢ Solve problems involving numbers up to 10,000,000 ➢ Identify the best way to check answers ➢ Justify the reasonableness of the answer within the context	➢ Multiply a whole number with a fraction ➢ Multiply a whole number with a fraction and express the answer in its simplest form ➢ Multiply two simple fractions and express the answer in its simplest form ➢ Work out how to multiply two improper fractions and express the answer in its simplest form	➢ Given two angles in a triangle, calculate the missing angle ➢ Given information about angles in a quadrilateral, calculate missing angles ➢ Calculate missing angles in parallelogram, rhombus and trapezium from calculating diagonally opposite angles ➢ Calculate missing angles on a line ➢ Calculate missing angles where they are opposite	➢ Write known rules algebraically. ➢ Work out equations involving missing amounts, e.g. If 2x-1=9, what is x? ➢ Work out calculations when given value of 2 letters, e.g. What is 2a+3b if a=2 and b=5 ➢ Use rules algebraically for known relationships, e.g. p=4s for finding the perimeter of a square or Area = ½ bh ➢ Continue a linear number sequence involving positive and negative numbers ➢ Continue a linear number sequence involving fractions. ➢ Continue a linear number sequence involving decimal fractions

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YEAR 6: Spring 2: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
6 Measures	**2 Algebra**	**4 Addition & Subtraction**	**5 Fractions**	**2 Statistics**	**6 Geometry**
-Recognise that shapes with the same areas can have different perimeters and vice versa. -Calculate the area of parallelograms and triangles. -Recognise when it is possible to use formulae for area & volume of shapes.	-Find pairs of numbers that satisfy number sentences with two unknowns. -Enumerate all possibilities of combinations of two variables.	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	-Divide proper fractions by whole numbers. -Use written division methods where the answer has up to two decimal places. -Associate a fraction with division to calculate decimal fraction equivalents, for simple fractions	Calculate and interpret the mean as an average	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.
➢ Draw shapes with same area with different perimeters ➢ Solve problems involving area and perimeter ➢ Know formula for calculating area of triangle ➢ Calculate area of triangles ➢ Know formula for calculating area of parallelogram ➢ Calculate area of parallelograms	➢ Use known facts to calculate, if 17 + x + y = 42, use known number facts to calculate possible values for x and y. ➢ Use known facts to complete a table, e.g. 'The brown string is 9cm less than 2 times as long as the yellow string'. So… if y=5, s =?	Revise: ➢ Using all 4 operations ➢ Calculating a problem using at least 2 operations ➢ Calculating 2-step problems ➢ Explaining the order to solve calculations ➢ Solving calculations in correct order	➢ Divide a proper fraction by a whole number. ➢ Divide a proper fraction by a whole number and give the answer in its simples form. ➢ Know that 1/10 can be represented as 0.1 ➢ Know that 1/5 can be represented at 0.2 ➢ Know that ¼ can be represented as 0.25 ➢ Know that ½ can be represented as 0.5 ➢ Know that ¾ can be represented as 0.75 ➢ Calculate decimal fraction equivalent for all fractional values where the denominator is 3, 4, 5, 6, 8 or 10	➢ Know the term mean is the average ➢ Find the mean of a given set of numbers	➢ Know that the line across the centre of a circle is known as the diameter ➢ Know that the distance from the centre of a circle to the arc of the circle is the radius ➢ Know the distance around the outside of the circle is called the circumference ➢ Know the diameter of the circle is twice the radius

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