# Year 4 Moving into Year 5

Long Term and Medium Term Planning

# Year 5: Overview of the year

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Y4 Geometry 2D shape and position 3<br><br>Y4 Multiplication and division – including exploring decimal numbers 6 | 1 Addition and Subtraction, including problems | 3 Multiplication & Division | 2 Geometry Reflection and Translation | 2 Statistics and measures | 6 Multiplication and division |
| Y4 Fractions and Decimals (using measures) 3<br><br>Y4 Statistics 2 | 1 Geometry Angles | 1 Statistics and measures, including time | 3 Geometry | 4 Place value | 5 Place value |
| Y4 Measures Volume, capacity and mass 4<br><br>Y4 Geometry Position and Area 1 | 1 Measures Perimeter and Area | 3 Place value. Roman numerals, and negative numbers | 5 Multiplication & Division | 3 Fractions | 5 Addition & Subtraction |
| Y4 Fractions<br><br>Y4 Geometry and Shape | 1 Multiplication and division, Factors & multiples | 3 Addition and subtraction, including problems | 4 Geometry 2D and 3D shape | 4 Measures Time | 5 Fractions |
| 1 Place value | 2 Multiplication & Division, including problems | 4 Multiplication and Division | 2 Fractions | 4 Fractions | 5 Measures Mass, volume & capacity |
| 2 Place value Decimals | 1 Fractions compare, order, equivalence | 2 Measures Area | 3 Measures, including area and volume | 4 Addition & Subtraction | 5 Geometry Area and volume of shapes |

# YEAR 5 : AUTUMN 1: Overview and Teaching Steps

| WEEK 1 – Year 4 | | WEEK 2 – Year 4 | | WEEK 3 – Year 4 | | WEEK 4 – Year 4 | | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|---|---|---|---|
| **3 Geometry 2D Shape** | **6 Multiplication & Division - Decimals** | **3 Fractions** | **2 Statistics** | **4 Measures Length/ Mass/ Capacity/Time** | **4 Geometry Position & Direction** | **5 Fractions** | **5 Geometry** | **1 Place Value** | **2 Place Value Decimals** |
| -Identify lines of symmetry in 2D shapes presented in different orientations.<br>- Complete a simple symmetric figure with respect to a specific line of symmetry | Find the effect of multiplying a number with up to 2 decimal places by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. | Find the effect of dividing a 1-digit or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. | Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs | Convert between different units of measure (e.g. km to m; hr to min) | -Describe positions on a 2D grid as coordinates in the first quadrant<br>- Describe movements between positions as translations of a given unit to the left/right and up/down<br>- Plot specified points and draw sides to complete given polygon | -Recognise and write decimals equivalents of any number of tenths or hundredths<br>- Recognise and write decimal equivalents to ¼, ½ and ¾. | Identify acute and obtuse angles and compare and order angles up to two right angles by size. | Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. | Count up and down in thousandths; recognise that thousandths arise from dividing an object into 1000 equal parts and in dividing numbers or quantities by 1000. |
| Define and show understanding of symmetry<br><br>Show lines of symmetry in an equilateral or isosceles triangle (in different orientations)<br><br>Show lines of symmetry in a quadrilateral (in different orientations)<br><br>Show lines of symmetry in circle<br><br>Create simple symmetrical figures and show lines of symmetry<br><br>Recognise lines of symmetry in given shapes | Multiply any number with up to 2 decimal places by 10 and express the answer using tenths.<br><br>Multiply any number with up to 2 decimal places by 100 and express the answer using tenths and hundredths. | Divide any 2 digit number by 10 and express the answer using tenths.<br><br>Divide any 2 digit number by 100 and express the answer using tenths and hundredths. | Compare information in bar charts to answer questions<br><br>Solve addition problems using information in bar charts to answer questions<br><br>Solve difference problems using information in bar charts to answer questions<br><br>Compare information in pictograms to answer questions<br><br>Solve addition problems using information in pictograms to answer questions<br><br>Solve difference problems using information in pictograms to answer questions<br><br>Compare information in tables to answer questions<br><br>Solve addition problems using information in tables to answer questions<br><br>Solve difference problems using information in tables to answer questions | Revise relationships between measures: 1000m = 1km; 100cm = 1m; 10mm = 1cm<br><br>Revise relationships between measures: 1000g = 1kg<br><br>Revise relationships between measures: 60 min = 1 hour; 60 secs = 1 min; 12 months = 1 year<br><br>Solve problems involving conversion between units of measure<br><br>Express a distance of more than 1km in m<br><br>Express a distance of more than 1cm in mm<br><br>Express a mass of more than 1kg in g<br><br>Express a volume of more than 1l in ml<br><br>Express the passing of time of more than 1 hour in minutes<br><br>Express the passing of time of more than 1 minute in seconds. | Read coordinates using both axes<br><br>Plot points using both axes<br><br>Answer questions involving coordinates<br><br>Create shapes by plotting points in first quadrant<br><br>Explain a change in a given position by the movement made along the axes of the quadrant<br><br>Use numbered axes to plot points to form a polygon<br><br>Describe the properties of the polygon | Know that 1/10 = 0.1 [for each tenth value]<br><br>Know that 1/100 = 0.01 [for each hundredth value]<br><br>Know that 0.25 = ¼<br><br>Know that 0.5 = ½<br><br>Know that 0.75 = ¾ | Know that an angle smaller than a right angle is known as an acute angle<br><br>Know that an angle larger than a right angle is known as an obtuse angle<br><br>Identify and describe an acute angle<br><br>Identify and describe an obtuse angle<br><br>Compare and order angles by size | ➢ Count forwards and backwards from any given number in steps of 100<br>➢ Count forwards and backwards from a given number in steps of 1,000<br>➢ Count forwards and backwards from a given number in steps of 10,000<br>➢ Count forwards or backwards from a given number in steps of 100,000<br>➢ Count forwards and backwards from a given number in steps of 1,000,000 | ➢ Count up in thousandths starting at zero<br>➢ Count back in thousandths to zero<br>➢ Count up in thousandths starting at any 'thousandths number'<br>➢ Count back in thousandths starting at any 'thousandths number'<br>➢ Know that thousandths arise from dividing an object, quantity or number into 1000 equal parts<br>➢ Place fractions (thousandths) in order – ascending and descending. |

# YEAR 5 : AUTUMN 1: Maths Meetings and Mental Maths

| WEEK 1 – Year 4 | WEEK 2 – Year 4 | WEEK 3 – Year 4 | WEEK 4 – Year 4 | WEEK 5 – Year 4 | WEEK 6 – Year 5 |
|---|---|---|---|---|---|
| **5 Place Value** | **4 Fractions** | **6 Place Value** | **4 Addition & Subtraction** | Round decimals with one decimal place to the nearest whole number.<br>Compare numbers with the same number of decimal places up to two decimal places. | **Y5 Addition & Subtraction 2** |
| Compare and order numbers beyond 1000 | Count up and down in hundredths; recognise that hundredths arise from dividing an object into 100 equal parts and in dividing numbers or quantities by 100. | Round any number to the nearest 10, 100 or 1000 | Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. | Round decimals with one decimal place to the nearest whole number.<br>Compare numbers with the same number of decimal places up to two decimal places. | Add and subtract whole numbers with more than 4 digits including using formal written methods (columnar addition and subtraction). |
| ➢ Know which number in a set of 4 digit numbers is the greatest<br>➢ Know which number in a set of 4 digit numbers is the smallest<br>➢ Order a set of 4 digit numbers from smallest to largest<br>➢ Order a set of 4 digit numbers from largest to smallest | ➢ Count up in hundredths starting at zero<br>➢ Count back in hundredths to zero<br>➢ Count up in hundredths starting at any 'hundredth number'<br>➢ Count back in hundredths starting at any 'hundredth number'<br>➢ Know that hundredths arise from dividing an object, quantity or number into 100 equal parts<br>➢ Place factions (hundredths) in order – ascending and descending. | ➢ Round any number up to 100 to the nearest 10<br>➢ Round any number up to 1000 to the nearest 10<br>➢ Round any number up to 1000 to the nearest 100<br>➢ Round any number up to 10,000 to the nearest 1000 | ➢ Solve two-step problems using addition to 1000.<br>➢ Solve two-step problems with subtraction to 1000.<br>➢ Solve two-step problems using addition and subtraction to 1000. | ➢ Round a number with one decimal place to nearest whole number.<br>➢ Given 3 numbers with one decimal place, place in order (smallest to largest and vice versa).<br>➢ Given 5 numbers with one decimal place, place in order (smallest to largest and vice versa).<br>➢ Given 3 numbers with two decimal places, place in order (smallest to largest and vice versa).<br>➢ Given 5 numbers with two decimal places, place in order (smallest to largest and vice versa). | ➢ Add numbers with up to 5-digits with no exchanging<br>➢ Add numbers with up to 5-digits with exchanging<br>➢ Subtract numbers with up to 5-digits with no exchanging<br>➢ Subtract numbers with up to 5-digits with exchanging |

# YEAR 5 : AUTUMN 2: Overview and Teaching Steps

| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|
| **1 Addition & Subtraction** | **1 Geometry Angles** | **1 Measures Perimeter and Area** | **1 Multiplication & Division - Factors** | **2 Multiplication & Division** | **1 Fractions** |
| Add and subtract numbers mentally with increasingly large numbers. | Know angles are measured in degrees; estimate & compare acute, obtuse & reflex angles.<br>Identify:<br>- Angles at a point on a straight line & ½ a turn (total 180°)<br>- Angles at a point & one whole turn (total 360°)<br>- Other multiples of 90°<br>Draw given angles & measure them in degrees | -Measure and calculate the perimeter of composite rectilinear shapes in cm and m.<br>- Calculate & compare the area of rectangles (including squares, & including using standard units, square centimetres ($cm^2$) and square metres ($m^2$) & estimate the area of irregular shapes. | Identify multiples and factors including finding all factor pairs of a number and common factors of two numbers. | -Multiply and divide numbers mentally drawing upon known facts.<br>-Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers<br>-Establish whether a number up to 100 is prime and recall prime numbers up to 19. | Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.<br><br>Read and write decimal numbers as fractions, e.g. 0.71 = 71/100. |
| Mentally:<br>➢ Add any two 2-digit numbers<br>➢ Subtract any 2-digit number from any other greater 2-digit number<br>➢ Subtract any 2-digit number from any 3-digit number<br>➢ Add any 2-digit and any 3-digit number<br>➢ Subtract any 2-digit number from any 4-digit number<br>➢ Add together two 3-digit numbers<br>➢ Subtract a 3-digit number from a greater 3-digit number<br>➢ Add any 1000s number to any 4 or 5-digit number<br>➢ Subtract any 1000s number from a greater 5-digit number | ➢ Know that 90° is equivalent to a quarter turn<br>➢ Know that 180° is equivalent to a half turn<br>➢ Know that 270° is equivalent to a three-quarter turn<br>➢ Know that 360° is equivalent to a full turn<br>➢ Estimate, compare and measure angles in drawings identifying acute, obtuse and reflex angles<br>➢ Able to use a protractor to measure angles<br>➢ Able to use a protractor to draw angles | ➢ Calculate perimeter of range of shapes, including composite shapes by dividing into smaller shapes<br>➢ Know the units of measure for calculating area and how to represent ($cm^2$/$m^2$)<br>➢ Explain how to calculate the area of a shape using a formula<br>➢ Calculate area using formula<br>➢ Calculate the area of composite shapes by dividing into smaller shapes<br>➢ Calculate the area of larger spaces using $m^2$ | ➢ Identify multiples of all numbers up to 100.<br>➢ Know all factors that make up all numbers to 100. | ➢ Use mental applications to multiply numbers making use of multiplication tables up to 12x12.<br>➢ Use mental applications to divide numbers making use of multiplication tables up to 12x12.<br>➢ Describe what a prime number is<br>➢ Describe what a prime factor is<br>➢ Describe what a composite number is<br>➢ Explain how to work out whether a number is a prime number.<br>➢ Recall all prime numbers to 19. | ➢ Identify equivalent fractions for ?/3<br>➢ Identify equivalent fractions for ?/4<br>➢ Identify equivalent fractions for ?/10<br>➢ Identify equivalent fractions for ?/100<br>➢ Write 0.5; 0.25; 0.1 as fractions<br>➢ Write any decimal with 1 decimal place as a fraction<br>➢ Write any decimal with 2 decimal places as a fraction |

# YEAR 5 : SPRING 1: Overview and Teaching Steps

| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|
| **3 Multiplication & Division** | **1 Statistics** | **3 Place Value Roman Numerals** | **3 Addition & Subtraction** | **4 Multiplication & Division** | **2 Measures Area** |
| Multiply numbers up to 4-digits by a 1-digit or 2-digit number using a formal written method, including long multiplication for 2-digit numbers. | Complete, read and interpret information in:<br>- tables, including timetables | - Interpret negative numbers in context, count forwards and backwards with positive and negative numbers including through zero.<br>- Read Roman numerals to 1000 and recognise years written in Roman numerals | Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. | Divide numbers up to 4-digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context. | Calculate & compare the area of rectangles (including squares) including using standard units, square centimetres ($cm^2$) and square metres ($m^2$) & estimate the area of irregular shapes. |
| ➢ Multiply any number with up to 3-digits by a single digit number.<br>➢ Multiply any number with up to 4-digits by any single number.<br>➢ Multiply any number with up to 3-digits by a 2-digit number.<br>➢ Multiply any number with up to 4-digits by a 2-digit number. | ➢ Know how to construct a table from a set of given information<br>➢ Know how to construct a table using only the relevant information<br>➢ Read a table to answer questions<br>➢ Read a timetable to answer questions<br>➢ Construct own table and timetable making decision about labelling | ➢ Interpret temperatures at -°C on a thermometer.<br>➢ Count forward from -20 to 20<br>➢ Count backwards from 20 to -20<br>➢ Revisit Roman numerals to 100<br>➢ Read Roman numerals to 1000<br>➢ Write Roman numerals to 1000<br>➢ Read dates in context represented in Roman numerals | ➢ Use rounding to add and subtract any 2-digit numbers to check reasonableness of answer.<br>➢ Use rounding to add and subtract any 3-digit numbers to check reasonableness of answer.<br>➢ Use rounding to add and subtract any 4-digit numbers to check reasonableness of answer. | ➢ Divide any number with 3-digits by a single digit number with no remainder.<br>➢ Divide any number with 4-digits by a single digit number with no remainder.<br>➢ Divide any number with 3-digits by a single digit number with a remainder.<br>➢ Divide any number with 4-digits by a single digit number with a remainder.<br>➢ Divide any number with 3-digits by 10, showing remainder where appropriate.<br>➢ Divide any number with 4-digits by 10, showing remainder where appropriate. | ➢ Know the units of measure for calculating area and how to represent ($cm^2$/$m^2$)<br>➢ Explain how to calculate the area of a shape using a formula<br>➢ Calculate area using formula<br>➢ Calculate the area of composite shapes by dividing into smaller shapes<br>➢ Calculate the area of larger spaces using $m^2$ |

# YEAR 5 : SPRING 2: Overview and Teaching Steps

| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|
| **2 Geometry Reflection/ Translations** | **3 Geometry** | **5 Multiplication & Division** | **4 Geometry** | **2 Fractions** | **3 Measures** |
| 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 | Distinguish between regular and irregular polygons based on reasoning about equal sides and angles | Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. | -Identify 3D shapes, including cubes and other cuboids, from 2D representations<br>- Use the properties of rectangles to deduce related facts & find missing lengths & angles. | Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements. | - Estimate volume (e.g. using 1 $cm^3$ blocks to build cubes, including cuboids) & capacity (e.g. using water).<br>- Convert between different units of metric measure (e.g. km/m; cm/m; cm/mm; g/kg; l/ml). |
| ➢ Reflect a shape and re-plot<br>➢ Translate a shape and re-plot<br>➢ Describe the properties of the reflected and/or translated shape – evidencing that the shape and size has not changed | ➢ Use known facts to explain differences between shapes | ➢ Multiply any number by 10.<br>➢ Multiply any number by 100.<br>➢ Multiply any number by 1000.<br>➢ Divide any number by 10.<br>➢ Divide any number by 100.<br>➢ Divide any number by 1000. | ➢ Identify 3D shapes from 2D images<br>➢ Calculate missing lengths and angles using known facts | ➢ Know that a whole number can be written as a fraction, e.g. 2/2 etc.<br>➢ Know that 1½ can be written as 3/2 etc.<br>➢ Convert any improper fraction to a mixed fraction and vice versa | ➢ Know that volume is measured in $cm^3$ and $m^3$<br>➢ Use cubes to calculate the volume of a given shape<br>➢ Use water and measuring equipment to calculate the capacity of a range of containers<br>➢ Express a distance of more than 1km in m<br>➢ Express a distance of more than 1cm in mm<br>➢ Express a mass of more than 1kg in g<br>➢ Express an amount of more than 1l in ml |

# YEAR 5 : SUMMER 1: Overview and Teaching Steps

| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|
| **2 Statistics** | **4 Place Value** | **3 Fractions** | **4 Measures Time** | **4 Fractions Decimals** | **4 Addition & Subtraction** |
| Solve comparison, addition and difference problems using information presented in a line graph | Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit | Compare and order fractions whose denominators are all multiples of the same number. | Solve problems involving converting between units of time. | -Round decimals with two decimal places to the nearest whole number and to one decimal place.<br>- Read, write, order and compare numbers with up to three decimal places. | Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. |
| ➢ Compare information in line graphs to answer questions<br>➢ Solve addition problems using information in line graphs to answer questions<br>➢ Solve difference problems using information in line graphs to answer questions | ➢ Revise reading and writing numbers to 1000<br>➢ Read all numbers from 1000 to 50,000 in numerals<br>➢ Read all numbers from 1000 to 1,000,000 in numerals<br>➢ Recognise the value of each digit up to 1,000,000<br>➢ Know and use the terms: ones, tens, hundreds, ten thousands, hundred thousand and million correctly<br>➢ Partition any number up to 1,000,000 showing the value of each digit | ➢ Compare and order fractions with the same denominator.<br>➢ Compare and order fractions with denominators of 2, 4, 8.<br>➢ Compare and order fractions with denominators of 5, 10.<br>➢ Convert fractions with different denominators to have a common denominator.<br>➢ Order two different fractions with different denominators that are multiples of the same number.<br>➢ Order more than two different fractions with different denominators that are multiples of the same number. | ➢ Solve a range of problems involving all units of time | ➢ Round a number with two decimal places to the nearest whole number.<br>➢ Round a number with two decimal places to the nearest number with one decimal place.<br>➢ Given 3 numbers with three decimal places, place in order (smallest to largest and vice versa).<br>➢ Given 5 numbers with three decimal places, place in order (smallest to largest and vice versa). | ➢ Identify the number of steps in a problem<br>➢ Identify the operations to be used<br>➢ Solve problems and check accuracy using estimation and rounding to check reasonableness of answer |

# YEAR 5 : SUMMER 2: Overview and Teaching Steps

| WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|
| **6 Multiplication & Division** | **5 Place Value** | **5 Addition & Subtraction** | **5 Fractions Decimals** | **5 Measures** | **5 Geometry** |
| 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 | Recognise the percent symbol (%) and understand that per cent relates to 'number of parts per hundred' and write percentages as a fraction with denominator 100, and as a decimal. | Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. | Consolidate and revise all Year 5 learning associated with geometry to include work on angles, translations and shape |
| ➢ Know, by heart, the square of all numbers between 2 and 12.<br>➢ Know why a square number is called a square number by drawing squares<br>➢ Use the symbol $^2$ accurately.<br>➢ Explain the relationship between the square of a number and the square root of a number.<br>➢ Knowing the square of a number, use the inverse to calculate the square root.<br>➢ Use the symbol $^3$ accurately. | ➢ Round any number up to 10,000 to the nearest 10<br>➢ Round any number up to 10,000 to the nearest 100<br>➢ Round any number up to 10,000 to the nearest 1,000<br>➢ Round any number up to 100,000 to the nearest 10<br>➢ Round any number up to 100,000 to the nearest 100<br>➢ Round any number up to 100,000 to the nearest 1,000<br>➢ Round any number up to 100,000 to the nearest 10,000<br>➢ Round any number up to 1,000,000 to the nearest 10<br>➢ Round any number up to 1,000,000 to the nearest 100<br>➢ Round any number up to 1,000,000 to the nearest 1,000<br>➢ Round any number up to 1,000,000 to the nearest 10,000<br>➢ Round any number up to 1,000,000 to the nearest 100,000 | Revise:<br>➢ Adding numbers with up to 5-digits with no exchanging<br>➢ Adding numbers with up to 5-digits with exchanging<br>➢ Subtracting numbers with up to 5-digits with no exchanging<br>➢ Subtracting numbers with up to 5-digits with exchanging | ➢ Know what the % symbol stands for.<br>➢ Know that percent deals with a number or amount out of 100.<br>➢ Write % of amounts.<br>➢ Know that 50% is 50/100 = one half = ½.<br>➢ Know that 0.5 = 50%<br>➢ Know that 25% is 25/100 = one quarter = 1/4.<br>➢ Know that 0.25 = 25%<br>➢ Know the percent values of all tenths.<br>➢ Know the percent values of all fifths.<br>➢ Know the percent values of all quarters. | ➢ Know the approximate number of metres in 1 mile<br>➢ Know the approximate relationship between inches and cm<br>➢ Know the approximate relationship between a pound and a gram<br>➢ Know the approximate relationship between a pint and a litre<br>➢ Carry out a range of approximate conversion calculations using above | Revise:<br>➢ Reflecting a shape and re-plot<br>➢ Translating a shape and re-plot<br>➢ Describing the properties of the reflected and/or translated shape – evidencing that the shape and size has not changed<br>➢ Estimating, comparing and measuring angles in drawings identifying acute, obtuse and reflex angles<br>➢ Using a protractor to measure angles<br>➢ Using a protractor to draw angles |