Year 5/6 – Autumn Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<u>Number – Place Value</u> Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. **Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.** Count forwards or backwards in steps of powers of 10 for any given number up to 1000000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. **Use negative numbers in context, and calculate intervals across zero.** Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000 **Round any whole number to a required degree of accuracy.** Solve number problems and practical problems that involve all of the above. **Solve number and practical problems that involve all of the above.** Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.			<u>Number- Addition and Subtraction</u> Add and subtract numbers mentally with increasingly large numbers. **Perform mental calculations, including with mixed operations and large numbers.** Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. **Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.** Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. **Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why.**		<u>Number – multiplication and division</u> Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers by 10, 100 and 1000. Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. **Identify common factors, common multiples and prime numbers.** Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers. **Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication.** 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. **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, interpreting remainders according to the context.** **Use their knowledge of the order of operations to carry out calculations involving the four operations.** Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign **Solve problems involving addition, subtraction, multiplication and division.**			<u>Statistics</u> Solve comparison, sum and difference problems using information presented in a line graph. **Interpret and construct pie charts and line graphs and use these to solve problems.** Complete, read and interpret information in tables including timetables. **Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.** **Calculate the mean as an average**.		<u>Measurement: Perimeter, Area and Volume</u> Measure and calculate the perimeter of composite rectilinear shapes in cm and m. Calculate and compare the area of rectangles (including squares), and including using standard units, cm^2, m^2 estimate the area of irregular shapes. **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.** Estimate volume [for example using 1cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water] **Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm^3, m^3 and extending to other units (mm^3, km^3)**	

Year 5/6 – Spring Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number: Fractions Compare and order fractions whose denominators are multiples of the same number. **Compare and order fractions, including fractions > 1** Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. **Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.** 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. **Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions.** Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. **Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example $\frac{1}{4}$ x $\frac{1}{2}=\frac{1}{8}$]** **Divide proper fractions by whole numbers [for example $\frac{1}{3}\div 2=\frac{1}{6}$]** Read and write decimal numbers as fractions [for example 0.71 = $\frac{71}{100}$] **Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example $\frac{3}{8}$]** Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.					Number: Decimals and Percentages Read, write, order and compare numbers with up to three decimal places. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. **Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places.** Round decimals with two decimal places to the nearest whole number and to one decimal place. **Solve problems which require answers to be rounded to specified degrees of accuracy.** Solve problems involving number up to three decimal places. **Multiply one-digit numbers with up to 2 decimal places by whole numbers.** **Use written division methods in cases where the answer has up to 2 decimal places.** Recognise the per cent 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. Solve problems which 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. **Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison.** **Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.**			Year 5 – Multiplication and Division and RECAP Recognise and use square numbers and cube numbers and the notation for squared (^{2}) and cubed (^{3}) 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 **Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.** **Year 6: Algebra and Ratio** **Use simple formulae** **Generate and describe linear number sequences.** **Express missing number problems algebraically.** **Find pairs of numbers that satisfy an equation with two unknowns.** **Enumerate possibilities of combinations of two variables.** **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 similar shapes where the scale factor is known or can be found.** **Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples**		

Year 5/6 – Summer Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<u>Measurement- converting units</u> Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml] **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 up to 3dp.** Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. **Convert between miles and kilometres**. 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. **Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.**		<u>Geometry- position and direction</u> 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. **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.**	<u>Geometry- Properties of Shapes and Angles</u> Identify 3D shapes, including cubes and other cuboids, from 2D representations. 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. **Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons.** Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees (°) **Draw 2-D shapes using given dimensions and angles.** Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90° **Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.**			.	Investigations				