

- Oral mental starters (ongoing, throughout the term):**
- Identify multiples and count from (and back to) 0 in multiples of 3, 4, 6, 7, 8, 9, 11,12, 25, 50, 100 and 1000
 - Recall and use multiplication **and** division facts for the 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 times tables (up to the 12th multiple)
 - Find **all** factor pairs of a given number; find all common factors for a pair of numbers
 - Multiply and divide numbers mentally using known facts and a range of strategies
 - Multiply numbers with up to two decimal places by 10, 100 and 1000 and divide corresponding numbers by 10, by 100 and by 1000
 - Subtract larger numbers mentally by finding the difference (small differences), e.g. 8004 – 6999 = 1005 (consider empty number lines)
 - Find doubles of numbers up to five digits (using knowledge of partitioning and place value) and find corresponding halves
 - Count forwards and backwards with positive and negative whole numbers, including through zero; calculate intervals across zero (in context)
 - Recognise, describe and extend linear number sequences, including those involving decimals, e.g. 0.7, 1.4, 2.1 ; find the term to term rule
 - Compare and order fractions, decimals and percentages (using diagrams and resources to support)
 - Name and write equivalent fractions of a given number, including tenths and hundredths (support understanding by using materials and diagrams)
 - Recognise and use square numbers (up to 12 x 12) and the notation e.g. $9^2 = 81$
 - Find percentages of whole number quantities using known fraction equivalences e.g. 10% of £84; 20% of 80; 50% of £248
 - Know and use the vocabulary of prime numbers and begin to establish whether a number up to 100 is a prime number
 - Read and write Roman numerals to at least 1000 (M)
 - Count forwards and backwards in steps of powers of 10 (10,100,1000,10,000) from any given number up to 100,000

Areas of Study	No of days	Statutory requirements and non-statutory guidance	Suggested Key Vocabulary
<p>Number</p> <p>Number and place value</p> <p>Week 1</p>	<p>3-5</p>	<p>Read and write numbers to at least a million; recognise 1,000,000 as one million.</p> <p>Order and compare numbers within 1,000,000</p> <p>Round numbers up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000</p> <p>Determine the place value of each digit in a six-digit number</p> <p>Partition six-digit numbers into hundred thousands, ten thousands, thousands, hundreds, tens and ones/units; continue to use place value cards and charts to support, if necessary</p> <p>Use knowledge of place value to solve number problems by adding and subtracting 10, 100, 1000, 10,000 to any number up to 1,000,000 e.g. I am buying a new flat. It was for sale for £315,000 but the price has gone up by £1,000. How much does it cost now? Last year it was £10,000 cheaper. How much was it then?</p> <p>Reason about numbers and place value e.g. a number rounded to the nearest 10,000 is 120,000. What's the smallest number it could be? What's the largest number it could be?</p>	<p>Partition, Place Value</p> <p>Digit, number</p> <p>Units/ones, Tens, Hundreds, Thousands, Ten thousands, Hundred thousands, (one million)</p> <p>Order</p> <p>Compare</p> <p>More than, Less than, <, ></p> <p>Round</p>

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<p>Number</p> <p>Decimals/ place value</p> <p>&</p> <p>Addition/ Subtraction</p> <p>Week 2</p>	<p>2</p> <p>3</p>	<p>Read and write numbers with up to three decimal places</p> <p>Order and compare numbers with up to three decimal places (including in the context of measures)</p> <p>Round decimal numbers with one or two decimal places to the nearest whole number</p> <p>Round decimal numbers with two decimal places to one decimal place</p> <p>Determine the place value of each digit in a decimal number with up to three decimal places</p> <p>Partition decimal numbers with up to three decimal places; use place value cards and charts to support, if necessary</p> <p>Consolidate using the formal written method of addition to add two four-digit or five-digit numbers and decimal numbers (with up to three-decimal places), including in the context of money and measures (See Calculation Policy)</p> <p>Consolidate the formal written method of subtraction to subtract two four-digit or five-digit numbers and decimal numbers (with up to three decimal places), including in the context of money and measures (See Calculation Policy)</p> <p>Solve addition and subtraction two-step and multi-step word problems (including money and measures problems, with up to 3 decimal places), deciding which operations to use; use rounding and inverse operations to estimate and check answers to calculations</p>	<p>Partition, Place value</p> <p>Digit, number, decimal, tenth, hundredth, thousandths</p> <p>Order, compare</p> <p>More than, greater than, less than, <, ></p> <p>Round</p> <p>Inverse operations</p> <p>Addition</p> <p>Subtraction</p> <p>Estimate, check, inverse, round</p>
<p>Measurement</p> <p>Length, perimeter, area and volume</p> <p>Week 3</p>	<p>5</p>	<p>Convert between different metric units of length, using knowledge of place value, multiplication and division (consider as mental/oral activities)</p> <p>Estimate and measure length using appropriate units and equipment, including mixed units of measurement, and record using decimal notation, in practical contexts; measure and draw lines to the nearest mm (Possible link to Science Curriculum)</p> <p>Follow a line of enquiry related to length e.g. The total length of all my fingers is the same length as my arm. True or false?</p> <p>Consolidate understanding of perimeter and express the formula for finding the perimeter of a rectangle in words (and then letters); calculate the perimeter of rectilinear shapes and of composite rectilinear shapes; solve perimeter problems with missing measurements</p> <p>Consolidate understanding of area and relate finding area to arrays and to multiplication</p> <p>Find the area of rectangles using the formula in words (and then letters), using the notation for square centimetres (cm²) and square metres (m²); estimate the area of irregular shapes by counting squares</p> <p>Reason about area and perimeter e.g. draw a rectangle with an area of 36 cm² and a perimeter of 26cm. Can you find other rectangles with the same area?</p> <p>Consolidate understanding of volume; begin to estimate and calculate the volume of cubes and cuboids using standard units of cm³ (taken from Y6 Programmes of Study)</p>	<p>Length, height, width, distance</p> <p>km, kilometre</p> <p>m, metre</p> <p>cm, centimetre</p> <p>mm, millimetre</p> <p>Perimeter</p> <p>Area</p> <p>Square centimetres, cm², square metres, m²</p> <p>Volume, cuboids</p> <p>Cubic centimetres, cm³</p>

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<p>Geometry</p> <p>Properties of Shape (2D & 3D)</p> <p>Week 4</p>	<p>5</p>	<p>Identify 3D shapes, including cubes and other cuboids, from 2D representations; describe the properties of 3D shapes using vocabulary from previous years; extend with 'pairs of parallel faces'</p> <p>Identify simple nets of 3D shapes e.g. cube and cuboid</p> <p>Investigate the different nets that will make a cube e.g. using Polydron or squared paper to support (taken from Y6 programmes of study)</p> <p>Measure given angles to the nearest degree using a protractor</p> <p>Know that angles on a straight line and half a turn total 180°; know that angles at a point and a whole turn total 360°; use this knowledge to find missing angles</p> <p>Identify 2D shapes including all quadrilaterals and triangles</p> <p>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</p> <p>Describe properties of 2D shapes using vocabulary from previous terms/years, including 'pairs of parallel sides'; use conventional marking for parallel lines and right angles</p> <p>Solve problems/ reason about shapes e.g. Given the diagonals of a quadrilateral, draw the sides and identify the shape What's the same about a trapezium and a parallelogram? What's different about them? A cuboid is a prism. True or false? Convince me!</p>	<p>Relevant vocabulary from previous terms/ years including all triangles and quadrilaterals</p> <p>Pairs of parallel faces Net</p> <p>Degrees (°) Protractor</p> <p>Regular, irregular Parallel</p>
<p>Number</p> <p>Multiplication</p> <p>Week 5</p>	<p>2</p> <p>3</p>	<p>Recognise and use square numbers up to 12 x 12 and the notation for squared number (²)</p> <p>Introduce cube numbers and the notation e.g. $2^3 = 2 \times 2 \times 2 = 8$; relate to volume and cm^3</p> <p>Use the formal written method of short multiplication to multiply a two-digit number, a three digit-number or a four- digit number by a single digit number (See Calculation Policy)</p> <p>Consolidate the formal written method of long multiplication to multiply a two-digit number by a two-digit number; extend with multiplication of a three digit number by a two-digit number (See Calculation Policy)</p> <p>Solve word problems, which involve short and long multiplication e.g. How many hours are there in 8 weeks? There are 245 paper clips in a box. I buy 6 boxes. How many paper clips do I have? Tom is 15 years old today. How many months has he been alive? At the cinema there are 36 seats in a row and 28 rows. How many seats are there altogether? Notebooks cost £4.75 each. I buy 28 notebooks for my class. How much do I spend?</p>	<p>Square numbers (²) Cube numbers (³)</p> <p>Multiply, multiplication, times, product Thousands, hundreds, tens, ones/units, digit</p> <p>Formal method of short multiplication</p> <p>Formal method of long multiplication</p>

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<p>Number</p> <p>Division</p> <p>Week 6</p>	<p>2</p> <p>3</p>	<p>Know and apply tests of divisibility by 2, 3, 4, 5, 9, 10, 100 (consider as mental/oral starters)</p> <p>Consolidate understanding of prime numbers; recall prime numbers up to 19; begin to establish whether a number up to 100 is prime, using knowledge of multiplication and division facts, factors and multiples; use the vocabulary of prime numbers, prime factors and introduce composite (non-prime) numbers</p> <p>Use the formal method of short division to divide numbers with up to four- digits by a single digit number with whole number answers or with remainders, including expressing the remainder as a fraction (See Calculation Policy)</p> <p>Solve word problems, which involve short division, with and without remainders; interpret remainders appropriately for the context</p> <p>e.g. For every 7 tokens I collect I can get a free book. I collect 156 tokens. How many books can I get? (round down)</p> <p>I collect 110 eggs from my hens. If I put them into boxes of six, how many boxes will I need? (round up)</p>	<p>Prime number, composite number, prime factor</p> <p>Divide, division, divisor, dividend, quotient</p> <p>Short division</p> <p>Formal layout $\overline{)}$</p> <p>Round up/down, remainder</p>
<p>Number</p> <p>Fractions, decimals and percentages</p> <p>Week 7</p>	<p>5</p>	<p>Consolidate understanding of mixed numbers and improper fractions and convert from one form to the other</p> <p>Identify equivalent fractions of a given fraction using knowledge of multiplication and factors</p> <p>Find unit and non-unit fractions of whole number quantities e.g. $\frac{1}{6}$ of 420; $\frac{5}{6}$ of 72; relate to multiplication and division</p> <p>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</p> <p>e.g. $\frac{1}{5} \times 3 = \frac{3}{5}$; $\frac{2}{5} \times 4 = \frac{8}{5}$ (the answer can be expressed as a mixed number); $1\frac{1}{4} \times 3 = 3\frac{3}{4}$; $2\frac{3}{4} \times 3 = 8\frac{1}{4}$</p> <p>Solve problems and reason about fractions e.g. Would you rather have $\frac{5}{6}$ of £42 or $\frac{4}{5}$ of £45?</p> <p>Know decimal and percentage equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 ($\frac{1}{10}$, $\frac{2}{10}$, $\frac{3}{10}$...)</p> <p>Compare simple decimal, fraction and percentage equivalents, e.g. Which is greater 25% or $\frac{1}{5}$? 0.8 or $\frac{3}{4}$? How do you know? Use materials and diagrams to support</p> <p>Find percentages of whole number quantities using known fraction equivalences e.g. 10% of 45 = 4.5; 20% of 80 = 16; 50% of £184 = £92</p> <p>Solve word problems which involve percentages e.g. There are 80 children in the playground. 20% of them are girls. How many girls and how many boys are there?</p>	<p>Whole</p> <p>Unit fraction, non-unit fraction</p> <p>Numerator, denominator</p> <p>Equivalent fractions, mixed number, improper fraction</p> <p>Decimal, percentage, %, equivalence</p>

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<p>Measurement</p> <p>Units of measurement</p> <p>Week 8</p>	<p>2</p> <p>3</p>	<p>Convert between 12 hour digital clocks and 24 hour digital clocks e.g. What time on the 12 hour clock is 19:55? What time on the 24 hour clock is 8:20 pm?</p> <p>Convert between units of time e.g. how many seconds in five minutes? How many seconds in an hour? How many days are there in 12 weeks? How many months (and days) have you been alive? How many days are there in the first four months of this year altogether? How many hours in 5 days? How many hours in a week?</p> <p>Make estimates of measurements (length, mass and capacity) choosing suitable units of measure e.g. Approximately how tall am I? What is the capacity of my flask? How much does one tea-bag weigh?</p> <p>Convert between different units of metric measures, using decimal notation, when appropriate e.g. I am 158cm tall. How many metres is this? What is 1.255 km expressed as metres? How many ml in a 2.5 jug of juice? My dog weighs 4.25 kg. How much does he weigh in grams?</p> <p>Understand and use approximate equivalences between metric units and common imperial units, such as feet and inches, pounds and pints; establish where we still see/ use imperial units e.g. a pint of milk, inches on some rulers, my new baby weighs 7 pounds</p>	<p>All relevant vocabulary from previous years relating to measures (including time)</p> <p>Convert Units of measurement Decimal notation</p> <p>Metric measures, imperial measures</p>
<p>Geometry</p> <p>Position and Direction</p> <p>&</p> <p>Statistics</p> <p>Week 9</p>	<p>2</p> <p>3</p>	<p>Consolidate describing positions on a 2D grid as co-ordinates in the first quadrant; plot specified points and draw sides to complete a given polygon</p> <p>Extend by introducing the second quadrant and the use of negative numbers to plot points and to draw sides to complete a given polygon</p> <p>Use co-ordinates to describe reflections and translations of polygons</p> <p>Use information presented in timetables using 12 hour digital time and 24 hour digital time</p> <p>Complete, read and interpret information in timetables</p> <p>Solve problems by interpreting timetables e.g. bus or train times</p> <p>Use information presented in line graphs (including time graphs) with a wide range of scales; interpret line graphs including solving sum and difference problems; understand that line graphs are used to present continuous data</p> <p>Use information presented in bar charts with a wide range of scales; interpret bar charts including solving sum and difference problems; understand that bar charts are used to present discrete data</p> <p>Interpret a straight line graph showing conversion from km to miles and answer related questions (taken from Y6 Programme of Study)</p> <p>Follow a line of enquiry by collecting and presenting data; decide which representations of data are most appropriate and why</p>	<p>Co-ordinates, first quadrant, second quadrant, negative numbers</p> <p>Timetable, 12 hour/ 24 hour digital time</p> <p>Line graphs, time graphs, bar charts, data</p>
		<p>Find all factor pairs of a given number; find all common factors of two numbers e.g. the common</p>	<p>Factors, factor pair,</p>

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<p>Number</p> <p>Multiplication and division (mental methods)</p> <p>Week 10</p>	<p>5</p>	<p>factors of 36 and 42 are 2, 3, 4, 6 and 8</p> <p>Multiply and divide numbers mentally using a range of strategies, drawing upon known facts, knowledge of place value, inverse operations, knowledge of factors and multiples e.g. Use inverse operations, place value and the known fact $7 \times 8 = 56$ to calculate: $56 \div 8$; 70×8 ; $560 \div 70$; 0.8×7 ; 80×70 ; $560 \div 8$.....</p> <p>Partition and use the distributive law to calculate $47 \times 5 = (40 \times 5) + (7 \times 5) = 200 + 35 = 235$ Use partitioning to calculate $98 \div 7 = (70 + 28) \div 7 = 10 + 4 = 14$</p> <p>Understand the meaning of the = sign to indicate equivalence, including missing number problems e.g. $54 \div 9 = \square \div 7$; $8 \times \square = 4 \times 12$</p> <p>Consider the problem 'Adam's Apples'</p>	<p>common factors</p> <p>Multiply, multiplication, product Divide, division, divisor, dividend, quotient Inverse operation Partition</p> <p>Equivalence, equivalent</p> <p>Problem, solution</p>
<p>Number</p> <p>Addition and subtraction (mental methods)</p> <p>&</p> <p>Problem solving (all operations)</p> <p>Week 11</p>		<p>Add/subtract larger numbers and decimals mentally, using jottings (such as empty number lines) where necessary, for example: Use jottings to add two numbers together e.g. $8,465 + 3,328$ Find sums and differences of decimals e.g. $8.5 + 2.8$; $17.8 - 1.4$ Add 999 by adding 1,000 and adjusting; subtract 999 by subtracting 1,000 and adjusting Find a small difference between near multiples of 1000 by counting on using an empty number line e.g. $8006 - 6997$</p> <p>Solve two-step or multi-step word problem involving addition, subtraction, multiplication and division; use mental methods with jottings or formal written methods; decide which operations and methods to use; use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy e.g.</p> <p>I moved into my house in April 1998. How many years have I lived in this house? What will the year be when I have lived there for 25 years?</p> <p>There are 7,546 people at the theme park. 998 more people arrive. How many are there now? What if 1,001 people leave- how many will be left in the theme park?</p> <p>I buy a punnet of strawberries that cost £2.99 and a tray of peaches that cost £3.99. How much do I spend? How much change do I get from a ten pound note?</p> <p>I buy three trays of peaches and two punnets of strawberries. How much change will I get from £20? How many trays of peaches could I buy with £30? How much change would I get?</p> <p>Consider the problem 'Peter's Primes'</p>	<p>Addition, total, sum Subtraction, difference</p> <p>Calculate, calculation Operation, method</p>
		<p>Solve problems involving length, mass, capacity, e.g.</p>	<p>Weight, mass, measure</p>

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<p>Measurement</p> <p>Length, Mass and Capacity</p> <p>Week 12</p>	<p>5</p>	<p>A bottle of salad dressing holds 399ml. A tablespoon holds 15ml. How many tablespoons of dressing are in the bottle?</p> <p>I have a piece of rope 2.5 metres long. I cut off 65 cm. How much is left?</p> <p>There is 2.2kg of flour in a bag. How much flour is in 10 bags? If I use 500g of flour from a bag, how much will be left?</p> <p>A full bucket holds 5 ½ litres of water. A jug holds 500ml of water. How many jugs full of water will fill the bucket?</p> <p>Solve integer scaling problems e.g. Change this recipe for 4 people to a recipe for 12 people, for 6 people etc. (in preparation for ratio in Year 6)</p> <p>Investigate statements relating to measurement e.g.</p> <p>The circumference of your head is longer than the length of your arm. Is this true or false? How will you find out?</p> <p>True or false? Your height is equal to 3x the circumference of your head. How will you find out?</p>	<p>Kilograms, kg, grams, g</p> <p>Capacity, measure Litre, l, millilitre, ml</p> <p>Length, height, distance, km, kilometres, cm, centimetre, m, metre, mm, millimetre</p> <p>Problem, solution Investigate, investigation</p>
<p>Additional weeks</p> <p>To be used for:</p> <ul style="list-style-type: none"> • assessment, consolidation and responding to AfL • additional using and applying activities 			