| Number and Place Value | Addition and Subtraction | Multiplication and Division | Fractions | Measurement | Properties of Shape | Position and Direction | Statistics | Ratio and Proportion | Algebra |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No single band statements | No single band statements | No single band statements | No single band statements | No single band statements | No single band statements | No single band statements | No single band statements | No single band statements | No single band statements |


| Number and Place Value | Addition and Subtraction | Multiplication and Division | Fractions | Measurement | Properties of Shape | Position and Direction | Statistics | Ratio and Proportion | Algebra |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Count to and across 100, forwards and in tens from any number, forward and backward. <br> Count, read and write numbers to 100 in numerals, count in multiples of twos, fives and tens. <br> Identify one more and one less of a given number. <br> Identify and represent numbers using objects and pictorial representations including the number line and use the language of equal to, more than, less than (fewer), most, least. <br> Read and write numbers from 1 to 20 in numerals and words. | Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. <br> Represent and use number bonds and related subtraction facts within 20. <br> Add and subtract one-digit and two-digit numbers to 20 , including zero. <br> Solve one-step problems that involve addition and subtraction using concrete objects and pictorial representations and missing number problems such as $7=$ ? -9 . | Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. | Recognise, find and name a half as one of two equal parts of an object, shape or quantity. <br> Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. | Compare, describe and solve practical problems for lengths and heights e.g. long/short, longer/shorter, tall/short, double/half. <br> Compare, describe and solve practical problems for mass/weight e.g. heavy/light, heavier than, lighter than. <br> Compare, describe and solve practical problems for capacity and volume e.g. full/empty, more than, less than, half, half full, quarter. <br> Compare, describe and solve practical problems for time e.g. quicker, slower, earlier, later. <br> Read and write numbers from 1 to 20 in numerals and words. <br> Measure and begin to record mass/weight. <br> Measure and begin to record capacity and volume. <br> Measure and begin to record time (hours, minutes, seconds). <br> Recognise and know the value of different denominations of coins and notes. <br> Sequence events in chronological order using language e.g. before and after, next, first, today, yesterday, tomorrow, morning, relating to dates, including days of the week, weeks, months and years. <br> Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. | Recognise and name common 2-D shapes e.g. rectangles (including squares), circles and triangles. <br> Recognise and name common 3-D shapes e.g. cuboids (including cubes), pyramids and spheres. | Describe position, direction and movement, including whole, half, quarter and three-quarter turns. | No single band statements | No single band statements | No single band statements |


| Number and Place Value | Addition and Subtraction | Multiplication and Division | Fractions | Measurement | Properties of Shape | Position and Direction | Statistics | Ratio and Proportion | Algebra |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Count in steps of 2,3 and 5 from 0 and in tens from any number forward and backward. <br> Recognise the place value of each digit in a two-digit number (tens, ones). <br> Identify, represent and estimate numbers using different representations, including the number line. <br> Compare and order numbers from 0 up to 100, use <, > and $=$ signs. <br> Read and write numbers to at least 100 in numerals and in words. <br> Use place value and number facts to solve problems. | Solve problems with addition and subtraction using concrete objects and pictorial representations including those involving numbers, quantities and measures. <br> Solve problems with addition and subtraction applying his/her increasing knowledge of mental and written methods. <br> Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100 . <br> Add and subtract numbers using concrete objects, pictorial representations and mentally, including a two-digit number and ones. <br> Add and subtract numbers using concrete objects, pictorial representations and mentally, including a two-digit number and tens. <br> Add and subtract numbers using concrete objects, pictorial representations and mentally, including two twodigit numbers. <br> Add and subtract numbers using concrete objects, pictorial representations and mentally, including adding three one-digit numbers. <br> Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. <br> Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. | Recall and use multiplication and division facts for the <br> 2, 5 and 10 <br> multiplication tables, including recognising odd and even numbers. <br> Calculate mathematical statements for multiplication tables and write them using the multiplication (x), division ( $\div$ ) and equals (=) signs. <br> Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. <br> Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. | Recognise, find, name and write fractions $1 / 3$, $1 / 4,2 / 4$ and $3 / 4$ of a length, shape, set of objects or quantity. <br> Write simple fractions for example, $1 / 2$ of $6=3$ and recognise the equivalence of $2 / 4$ and $1 / 2$. | Choose and use appropriate standard units to estimate and measure length/height in any direction ( $\mathrm{m} / \mathrm{cm}$ ), mass (kg/g); temperature ( ${ }^{\circ} \mathrm{C}$ ), capacity (litres $/ \mathrm{ml}$ ) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. <br> Compare and order lengths, mass, volume/capacity and record the results using $>$, < and $=$. <br> Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. <br> Find different combinations of coins that equal the same amounts of money. <br> Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. <br> Compare and sequence intervals of time. <br> Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. <br> Remember the number of minutes in an hour and the number of hours in a day. | Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. <br> Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. <br> Identify 2-D shapes on the surface of 3-D shapes e.g. a circle on a cylinder and a triangle on a pyramid. <br> Compare and sort common 2D and 3-D shapes and everyday objects. | Order and arrange combinations of mathematical objects in patterns and sequences. <br> Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and threequarter turns (clockwise and anti-clockwise). | Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. <br> Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. <br> Ask and answer questions about totalling and comparing categorical data. | No single band statements | No single band statements |


| Number and Place Value | Addition and Subtraction | Multiplication and Division | Fractions | Measurement | Properties of Shape | Position and Direction | Statistics | Ratio and Proportion | Algebra |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Count from 0 in multiples of 4, 8, 50 and 100, find 10 or 100 more or less than a given number. <br> Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). <br> Compare and order numbers up to 1000 . <br> Identify, represent and estimate numbers using different representations. <br> Read and write numbers up to 1000 in numerals and words. <br> Solve number problems and practical problems involving these ideas. | Add and subtract numbers mentally, including a threedigit number and ones. <br> Add and subtract numbers mentally, including a threedigit number and tens. <br> Add and subtract numbers mentally, including a threedigit number and hundreds. <br> Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. <br> Estimate the answer to a calculation and use inverse operations to check answers. <br> Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction. | Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. <br> Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for twodigit numbers times one-digit numbers, using mental and progressing to formal written methods. <br> 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 | Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 . <br> Recognise, find and write fractions of a discrete set of objects; unit fractions and nonunit fractions with small denominators. <br> Recognise and use fractions as numbers; unit fractions and nonunit fractions with small denominators. <br> Recognise and show, using diagrams, equivalent fractions with small denominators. <br> Add and subtract fractions with the same denominator within one whole e.g. $5 / 7+1 / 7=6 / 7$. <br> Compare and order unit fractions, and fractions with the same denominators. <br> Solve fraction problems. | Measure, compare, add and subtract; lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ); mass (kg/g); volume/capacity (l/ml). <br> Measure the perimeter of simple 2-D shapes. <br> Add and subtract amounts of money to give change, using both $£$ and $p$ in practical contexts. <br> Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24 -hour clocks. <br> Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m. /p.m., morning, afternoon, noon and midnight. <br> Know the number of seconds in a minute and the number of days in each month, year and leap year. <br> Compare durations of events e.g. to calculate the time taken by particular events or tasks. | Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. <br> Recognise angles as a property of shape or a description of a turn. <br> Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. <br> Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. | No single band statements | Interpret and present data using bar charts, pictograms and tables. <br> Solve onestep and two-step questions e.g. 'How many more?' and 'How many fewer?' <br> using information presented in scaled bar charts and pictograms and tables. | No single band statements | No single band statements |


| Number and Place Value | Addition and Subtraction | Multiplication and Division | Fractions | Measurement | Properties of Shape | Position and Direction | Statistics | Ratio and Proportion | Algebra |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Count in multiples of $6,7,9,25$ and 1000. <br> Find 1000 more or less than a given number. <br> Count backwards through zero to include negative numbers. <br> Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones). <br> Order and compare numbers beyond 1000. <br> Identify, represent and estimate numbers using different representations including measures. <br> Round any number to the nearest 10 , 100 or 1000. <br> Solve number and practical problems that involve all $\mathrm{t}=\mathrm{of}$ the above and with increasingly large positive numbers. <br> Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. | Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. <br> Estimate and use inverse operations to check answers to a calculation. <br> Solve addition and subtraction twostep problems in contexts deciding which operations and methods to use and why. | Recall multiplication and division facts for multiplication tables up to $12 \times 12$. <br> Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers. <br> Recognise and use factor pairs and commutatively in mental calculations. <br> Multiply two-digit and three-digit numbers by a onedigit number using formal written layout. <br> Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as $n$ objects are connected to $m$ objects. | Recognise and show, using diagrams, families of common equivalent fractions. <br> Count up and down in hundredths, recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. <br> 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. <br> Add and subtract fractions with the same denominator. <br> Recognise and write decimal equivalents of any number of tenths or hundredths. <br> Recognise and write decimal equivalents to $1 / 4,1 / 2,3 / 4$. <br> Find the effect of dividing a one or two-digit number by 10 and 100 , identifying the value of the digits in the answer as ones, tenths and hundredths. <br> 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. <br> Solve simple measure and money problems involving fractions and decimals to two decimal places. | Convert between different units of measure e.g. kilometre to metre, hour to minute. <br> Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. <br> Find the area of rectilinear shapes by counting squares. <br> Estimate, compare and calculate different measures, including money in pounds and pence. <br> Read, write and convert time between analogue and digital 12 and 24-hour clocks. <br> Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. | Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. <br> Identify acute and obtuse angles and compare and order angles up to two right angles by size. <br> Identify lines of symmetry in 2-D shapes presented in different orientations. <br> Complete a simple symmetric figure with respect to a specific line of symmetry. <br> Begin to recognise where angles are greater than two right angles. Know the term straight angle referring to two right angles together. <br> Begin exploring line symmetry with two lines of symmetry. | Describe positions on a 2-D grid 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 a given polygon. | Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. <br> Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. | No single band statements | No single band statements |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. <br> Count forwards or backwards in steps of powers of 10 for any given number up to 1 000000. <br> Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. <br> Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000. <br> Solve number problems and practical problems that involve ordering and comparing numbers to 1000000 counting forwards or backwards in steps, interpreting negative numbers and rounding. <br> Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. | Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). <br> Add and subtract numbers mentally with increasingly large numbers. <br> Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. <br> Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. | Identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers. <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. <br> Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for two-digit numbers. <br> Multiply and divide numbers mentally drawing upon known facts. <br> 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. <br> Multiply and divide whole numbers and those involving decimals by 10 , 100 and 1000. <br> Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3). <br> Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. <br> Solve problems involving addition, subtraction, multiplication and meaning of equals sign. <br> Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. | Compare and order fractions whose denominators are all multiples of the same number. <br> Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. <br> Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $>1$ as a mixed number e.g. $2 / 5+4 / 5=5 / 6=11 / 5$ <br> Add and subtract fractions with the same denominator and denominators that are multiples of the same number. <br> Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. <br> Read and write decimal numbers as fractions e.g. $0.71=71 / 100$. <br> Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. <br> 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. <br> Solve problems involving number up to three decimal places. <br> 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. <br> Solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4,1 / 5,2 / 5,4 / 5$ and those fractions with a denominator of a multiple of 10 or 25. | Convert between different units of metric measure (for example, kilometre and metre, centimetre and metre; centimetre and millimetre; gram and kilogram, litre and millilitre). <br> Understand and use approximate equivalence between metric units and common imperial units such as inches, pounds and pints. <br> Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. <br> Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres ( $\mathrm{cm}^{2}$ ) and square metres ( $\mathrm{m}^{2}$ ) and estimate the area of irregular shapes. <br> Estimate volume e.g. using $1 \mathrm{~cm}^{3}$ blocks to build cuboids (including cubes) and capacity e.g. using water. <br> Solve problems involving converting between units of time. <br> Use all four operations to solve problems involving measure e.g. length, mass, volume, money using decimal notation, including | Identify 3-D shapes, including cubes and other cuboids, from 2D <br> representations. <br> Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. <br> Draw given angles and measure them in degrees $\left({ }^{\circ}\right)$. <br> Identify angles at a point and one whole turn (total $360^{\circ}$ ). <br> Identify angles at a point on a straight line and $1 / 2$ a turn (total $180^{\circ}$ ). <br> Identify other multiples of $90^{\circ}$. <br> Use the properties of rectangles to deduce related facts and find missing lengths and angles. <br> Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. | 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. | Solve comparison, sum and difference problems using information presented in a line graph. <br> Complete, read and interpret information in tables, including timetables. | No single band statements | No single band statements |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Read, write, order and compare numbers up to 10000000 and determine the value of each digit. <br> Round any whole number to a required degree of accuracy. <br> Use negative numbers in context and calculate intervals across zero. <br> Solve number and practical problems that involve ordering and comparing numbers to 10 000 000, <br> rounding to a required degree of accuracy, using negative numbers and calculating intervals across zero. | Perform mental calculations with mixed operations to carry out calculations involving the four operations. <br> Solve multi-step problems in contexts, deciding which operations and methods to use and why. <br> Solve problems involving addition and subtraction. <br> Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. | Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. <br> Divide numbers up to 4 digits by two-digit whole number using the formal written method of long division and interpret remainder as whole number remainders, fractions, or by rounding as appropriate for the context. <br> Divide numbers up to 4 digits by two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. <br> Perform mental calculations, including with missed operations and large numbers. <br> Identify common factors, common multiples and prime numbers. <br> Use his/her knowledge of the order of operations to carry out calculations involving the four operations. <br> Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. <br> Solve problems involving addition, subtractions, multiplication and division. <br> Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. | Use common factors to simplify fractions, use common multiples to express fractions in the same denomination. <br> Compare and order fractions, including fractions $>1$. <br> Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions. <br> Multiply simple pairs of proper fractions, writing the answer in its simplest form e.g. $1 / 4 \times 1 / 2=$ $1 / 8$. <br> Divide proper fractions by whole numbers e.g. $1 / 3 \div 2=$ 1/6. <br> Associate a fraction with division and calculate decimal fraction equivalents e.g. 0.375 for a simple fraction e.g. $3 / 6$. <br> Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10,100 and 1000 giving answers up to three decimal places. <br> Multiply one-digit numbers with up to two decimal places by whole numbers. <br> Use written division methods in cases where the answer has up to two decimal places. <br> Solve problems which require answers to be rounded to specific degrees of accuracy. <br> Recall and use equivalences between simple fractions, decimals and percentages, including different contexts. | Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. <br> 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 three decimal places. <br> Convert between miles and kilometres. <br> Recognise that shapes with the same areas can have different perimeters and vice versa. <br> Recognise when it is possible to use formulae for area and volume of shapes. <br> Calculate the area of parallelograms and triangles. <br> Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres ( $\mathrm{cm}^{3}$ ) and cubic metres ( $\mathrm{m}^{3}$ ) and extending to other units e.g. $\mathrm{mm}^{3}$ and $\mathrm{km}^{3}$. | Draw 2-D <br> shapes using given dimensions and angles. <br> Recognise, describe and build simple 3-D shapes, including making nets. <br> Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadriaterals and regular polygons. <br> Illustrate and name parts of circles including radius, diameter and circumference and know that the diameter is twice the radius. <br> Recognise angles where they meet at a point, are on a straight line, or are vertically opposite and find missing angles. | Describe positions on the full coordinate grid (all four quadrants). <br> Draw and translate simple shape on the coordinate plane and reflect them in the axis. | Interpret and construct pie charts and line graphs and use these to solve problems. <br> Calculate and interpret the means as an average | Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. <br> Solve problems involving the calculation of percentages e.g. on measures and such as $15 \%$ of 360 and the use of percentages as comparison. <br> Solve problems involving similar shapes where the scale factor is known or can be found. <br> Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples | Use simple formulae. <br> Generate and describe linear number sequences. <br> Express missing number problems algebraically <br> Find pairs of numbers that satisfy an equation with two unknowns. <br> Enumerate possibilities of combination s of two variables. |

