RECEPTION EARLY LEARNING GOALS (ELG)

Number	Numerical Patterns
Reception children at the expected level of development will:	
have a deep understanding of number to 10, including the composition of each number **RLS10**, **RLS11**, **RLS12**, RLS16 subitise (recognise quantities without counting) up to 5 **RLS1**, RLS2, RLS5, RLS9, RLS10, RLS11, RLS12, RLS14, RLS15 automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts **RLS11**, **RLS12**, **RLS14**	verbally count beyond 20, recognising the pattern of the counting system **RLS2**, **RLS6**, **RLS13**, **RLS16** compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity **RLS3**, **RLS5**, RLS6, **RLS7**, **RLS8**, **RLS9**, RLS12 explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally **RLS4**, **RLS14**, **RLS15**

DEVELOPMENT MATTERS (NON-STATUTORY CURRICULUM GUIDANCE)

Number	Numerical Patterns	Shape, space and measures
Children in Reception will be learning to:		
subitise **RLS1**, RLS2, RLS5, RLS9, RLS10, RLS11, RLS12, RLS14, RLS15 link the number symbol (numeral) with its cardinal number value **RLS6**, RLS9, **RLS10**, RLS11, **RLS13**, RLS16 explore the composition of numbers to 10 **RLS10**, **RLS11**, **RLS12**, **RLS13**, **RLS14**, **RLS15** automatically recall number bonds for numbers 0-5 and some to 10 **RLS10**, **RLS11**, **RLS12**	count objects, actions and sounds **RLS2**, **RLS6**, **RLS7**, RLS9, RLS10, RLS11 count beyond 10 **RLS13**, **RLS16** compare numbers **RLS5**, **RLS6**, **RLS7**, **RLS8**, **RLS9**, RLS10, RLS15 understand the 'one more than/one less than' relationship between consecutive numbers **RLS7**, **RLS9**, **RLS13**, RLS15, RLS16	select, rotate and manipulate shapes to develop spatial reasoning skills compose and decompose shapes so that children recognise a shape can have other shapes *within* it, just as numbers can continue, copy and create repeating patterns **RLS4**, **RLS14** compare length, height, weight and capacity **RLS3**, RLS14

YEAR 1

Number and place value	Addition and subtraction	Multiplication and division	Fractions
Year 1 pupils should be taught to:			
count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number 1LS2, **1LS3**, **1LS4**, **1LS10**, **1LS11**, **1LS36**, **1LS37** count, read and write numbers to 100 in numerals and count in multiples of twos, fives and tens 1LS2, 1LS3, 1LS4, 1LS5, 1LS10, **1LS24**, 1LS25, 1LS26, 1LS28, 1LS29, 1LS30, 1LS31, **1LS36**, 1LS37 given a number, identify one more and one less **1LS3**, 1LS4, **1LS11** 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' **1LS2**, 1LS3, **1LS4**, **1LS5**, 1LS6, 1LS7, **1LS8**, **1LS9**, **1LS11**, 1LS15, 1LS17, 1LS18, **1LS22**, 1LS23, 1LS25, 1LS35, **1LS36**, **1LS37** read and write numbers from 1 to 20 in numerals and words 1LS3, **1LS5**, **1LS10**, 1LS11, 1LS26, 1LS27, 1LS28, 1LS29, 1LS30, 1LS35, 1LS36, 1LS37	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs 1LS5, **1LS6**, 1LS7, 1LS8, **1LS9**, 1LS17, 1LS18, 1LS19, 1LS20, 1LS21, 1LS22, 1LS23, 1LS35 represent and use number bonds and related subtraction facts within 20 1LS5, 1LS6, 1LS7, 1LS8, 1LS9, **1LS12**, 1LS17, 1LS18, 1LS19, **1LS20**, 1LS21, 1LS22, 1LS23, **1LS35** add and subtract one-digit and two-digit numbers to 20, including zero **1LS6**, **1LS7**, **1LS8**, 1LS9, **1LS17**, **1LS18**, 1LS19, 1LS20, 1LS21, **1LS22**, 1LS23, 1LS35 solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? – 9 1LS5, **1LS7**, 1LS9 **1LS19**, **1LS20**, **1LS21**, 1LS22, 1LS26, **1LS35**	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 **1LS12**, **1LS13**, **1LS26**, **1LS27**, **1LS28**, **1LS29**, **1LS30**, 1LS33	recognise, find and name a half as one of two equal parts of an object, shape or quantity 1LS31, **1LS32**, **1LS33**, **1LS34** recognise, find and name a quarter as one of four equal parts of an object, shape or quantity **1LS32**, **1LS33**, **1LS34**

YEAR 1

Measurement	Geometry: properties of shapes	Geometry: position and direction
Year 1 pupils should be taught to:		
compare, describe and solve practical problems for: - lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) - mass / weight (for example, heavy/light, heavier than, lighter than) - capacity and volume (full/empty, more than, less than, half, half full, quarter) - time (quicker, slower, earlier, later) **1LS15**, **1LS25**, 1LS28, 1LS29, 1LS34, 1LS37 measure and begin to record the following: - lengths and heights - mass/weight - capacity and volume - time (hours, minutes, seconds) 1LS15, **1LS25**, **1LS3**,& 1LS35 recognise and know the value of different denominations of coins and notes **1LS23**, 1LS24, 1LS27, 1LS36, 1LS37 sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening) **1LS16** recognise and use language relating to dates, including days of the week, weeks, months and years **1LS16** tell the time to the hour and half past the hour and draw the hands on a clock face to show these times **1LS31**, 1LS34	recognise and name common 2-D and 3-D shapes, including: - 2-D shapes [for example, rectangles (including squares), circles and triangles] - 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] **1LS14**, 1LS29, 1LS33	describe position, direction and movement, including whole, half, quarter and three-quarter turns **1LS1**, **1LS31**, 1LS34

YEAR 2

Number and place value	Addition and subtraction	Multiplication and division	Fractions
Year 2 pupils should be taught to:			
count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward **2LS1**, **2LS4**, 2LS13, 2LS14, **2LS22**, 2LS41 recognise the place value of each digit in a two-digit number (tens, ones) **2LS1**, **2LS2**, **2LS3**, 2LS4, **2LS5**, **2LS6**, 2LS12, 2LS15, 2LS17, 2LS18, 2LS34, 2LS38, 2LS41 identify, represent and estimate numbers using different representations, including the number line **2LS1**, **2LS2**, **2LS3**, 2LS4, 2LS5, **2LS6**, 2LS12, 2LS13, 2LS15, 2LS20 compare and order numbers from 0 up to 100; use <, > and = signs **2LS1**, **2LS5**, **2LS6**, **2LS12**, 2LS13, 2LS34, 2LS35 read and write numbers to at least 100 in numerals and in words **2LS1**, 2LS2, 2LS3, 2LS4, 2LS5, 2LS6, 2LS12, 2LS14, **2LS41** use place value and number facts to solve problems 2LS5, 2LS6, **2LS10**, 2LS15, **2LS18**, 2LS34, **2LS38**	solve problems with addition and subtraction: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods 2LS7, 2LS8, 2LS9, 2LS10, 2LS11, 2LS14, 2LS15, 2LS16, **2LS17**, **2LS18**, **2LS34**, **2LS38**, 2LS41 recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 **2LS7**, **2LS8**, **2LS9**, 2LS10, 2LS34, 2LS38, 2LS41 add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers 2LS7, **2LS9**, 2LS10, **2LS15**, **2LS17**, 2LS18, 2LS38, **2LS41** show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot 2LS7, 2LS9, 2LS10, **2LS16** recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems 2LS7, 2LS8, 2LS9, 2LS10, 2LS18, 2LS34, **2LS38**, **2LS41**	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers 2LS21, **2LS22**, **2LS23**, **2LS24**, 2LS25, **2LS26**, 2LS27, 2LS34, 2LS35, 2LS38 calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs 2LS21, **2LS22**, **2LS23**, **2LS24**, 2LS25, **2LS26**, 2LS27, 2LS35, 2LS38 show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot **2LS24**, **2LS26**, 2LS27, 2LS35 solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts 2LS21, 2LS23, 2LS24, **2LS25**, 2LS26, **2LS27**, 2LS28, 2LS29, 2LS30, 2LS31, 2LS32, **2LS34**, **2LS35**, **2LS38**	recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity **2LS28**, **2LS29**, **2LS30**, **2LS31**, **2LS32**, 2LS34, 2LS37, 2LS40 write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ **2LS28**, **2LS29**, **2LS30**, **2LS31**, **2LS32**

YEAR 2

Measurement	Geometry: properties of shapes	Geometry: position and direction	Statistics
Year 2 pupils should be taught to:			
choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels **2LS12**, **2LS13**, 2LS32 compare and order lengths, mass, volume/capacity and record the results using >, < and = **2LS12**, 2LS13 recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value **2LS11**, 2LS21, 2LS25 find different combinations of coins that equal the same amounts of money **2LS11**, 2LS25, 2LS35 solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change **2LS11** compare and sequence intervals of time **2LS20** 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 **2LS19**, **2LS33** know the number of minutes in an hour and the number of hours in a day 2LS19, **2LS20**, 2LS32, 2LS33	identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line **2LS36**, **2LS37**, 2LS39 identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces **2LS36**, 2LS39 identify 2-D shapes on the surface of 3-D shapes [for example a circle on a cylinder and a triangle on a pyramid] 2LS29, **2LS36**, 2LS39 compare and sort common 2-D and 3-D shapes and everyday objects 2LS14, **2LS36**, 2LS37	order and arrange combinations of mathematical objects in patterns and sequences **2LS39** 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 three-quarter turns (clockwise and anticlockwise) **2LS19**, **2LS33**, **2LS40**	interpret and construct simple pictograms, tally charts, block diagrams and simple tables **2LS14**, 2LS29, 2LS36, 2LS37 ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity **2LS14** ask and answer questions about totalling and comparing categorical data **2LS14**

YEAR 3

Number and place value	Addition and subtraction	Multiplication and division	Fractions
Year 3 pupils should be taught to:			
count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number **3LS2**, 3LS8, 3LS9, **3LS16**, 3LS17, 3LS18 recognise the place value of each digit in a three-digit number (hundreds, tens, ones) **3LS1**, 3LS2, 3LS3, 3LS8, 3LS9, 3LS36, 3LS37 compare and order numbers up to 1000 **3LS1**, 3LS2, **3LS3**, 3LS4, **3LS37** identify, represent and estimate numbers using different representations 3LS1, 3LS2, **3LS3**, 3LS4, 3LS8, 3LS9, 3LS36, 3LS37 read and write numbers up to 1000 in numerals and in words **3LS1**, 3LS2, 3LS3, 3LS4, 3LS9, 3LS36, 3LS37 solve number problems and practical problems involving these ideas 3LS1, 3LS2, 3LS3, **3LS4**, **3LS10**	add and subtract numbers mentally, including: - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds **3LS5**, **3LS6**, 3LS7, 3LS8, 3LS9, 3LS10, 3LS11, 3LS15, 3LS19, 3LS31, **3LS34** add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction **3LS8**, **3LS9**, 3LS10, 3LS11, 3LS15, 3LS19, **3LS34** estimate the answer to a calculation and use inverse operations to check answers 3LS5, 3LS6, **3LS7**, 3LS8, 3LS9, 3LS10, 3LS11, 3LS19, 3LS34 solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction 3LS5, 3LS6, 3LS7, 3LS8, **3LS10**, **3LS34**	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables **3LS16**, **3LS17**, 3LS18, 3LS20, 3LS22, 3LS23, 3LS24, 3LS25, 3LS26, 3LS27, 3LS28, 3LS29, 3LS30, 3LS34 write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods 3LS16, 3LS17, **3LS18**, 3LS20, **3LS25**, **3LS26**, **3LS27**, **3LS28**, 3LS29, **3LS30**, 3LS34 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 3LS16, 3LS17, 3LS18, **3LS20**, **3LS27**, **3LS29**, 3LS34, **3LS38**	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 3LS21, 3LS22, **3LS35**, **3LS36**, **3LS37** recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators **3LS21**, 3LS22, 3LS23, 3LS24, 3LS35 recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators **3LS21**, 3LS24, 3LS35 recognise and show, using diagrams, equivalent fractions with small denominators **3LS22**, 3LS23, 3LS24 add and subtract fractions with the same denominator within one whole (for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$) **3LS23** compare and order unit fractions, and fractions with the same denominators **3LS22**, 3LS35 solve problems that involve all of the above 3LS21, **3LS24**, 3LS29

YEAR 3

Measurement	Geometry: properties of shapes	Geometry: position and direction	Statistics
Year 3 pupils should be taught to:			
measure, compare, add and subtract lengths (m/cm/mm), mass (kg/g) and volume/capacity (l/ml) **3LS4**, 3LS8, 3LS9, 3LS15, **3LS38** measure the perimeter of simple 2-D shapes **3LS15** add and subtract amounts of money to give change, using both £ and p in practical contexts 3LS8, 3LS9, **3LS34** tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks **3LS32**, 3LS33 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 **3LS32**, 3LS33 know the number of seconds in a minute and the number of days in each month, year and leap year **3LS31**, 3LS32, 3LS33 compare durations of events [for example to calculate the time taken by particular events or tasks] 3LS32, **3LS33**	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them 3LS12, 3LS13, **3LS14**, 3LS15, **3LS39** recognise that angles are a property of shape or a description of a turn **3LS12**, 3LS14, 3LS39 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 **3LS12**, 3LS14, 3LS39 identify horizontal and vertical lines and pairs of perpendicular and parallel lines **3LS13**, 3LS14, 3LS15, 3LS39	There are no statutory national curriculum requirements in this domain for Year 3.	interpret and present data using bar charts, pictograms and tables **3LS11**, **3LS19** solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts, pictograms and tables **3LS11**, **3LS19**

YEAR 4

Number and place value	Addition and subtraction	Multiplication and division	Fractions (including decimals)
Year 4 pupils should be taught to:			
count in multiples of 6, 7, 9, 25 and 1000 **4LS5**, 4LS6, **4LS37** find 1000 more or less than a given number **4LS1**, 4LS5 count backwards through zero to include negative numbers **4LS29**, **4LS37** recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) **4LS1**, 4LS2, 4LS3, 4LS4, 4LS8, 4LS28 order and compare numbers beyond 1000 **4LS1**, **4LS2**, 4LS28 identify, represent and estimate numbers using different representations 4LS1, **4LS2**, 4LS4, 4LS28, 4LS29 round any number to the nearest 10, 100 or 1000 **4LS2**, 4LS3, 4LS4 solve number and practical problems that involve all of the above and with increasingly large positive numbers **4LS8**, **4LS37** 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 **4LS28**	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate **4LS3**, **4LS4**, 4LS8, 4LS13, **4LS17**, 4LS18 estimate and use inverse operations to check answers to a calculation 4LS3, 4LS4, **4LS17**, 4LS27 solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why **4LS8**	recall multiplication and division facts for multiplication tables up to 12 × 12 4LS5, **4LS6**, 4LS7, 4LS8, 4LS13, 4LS21, 4LS22, 4LS23, 4LS24, 4LS25, **4LS34**, 4LS35, 4LS36, 4LS37 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 4LS9, 4LS24, **4LS34** recognise and use factor pairs and commutativity in mental calculations **4LS7**, 4LS24 multiply two-digit and three-digit numbers by a one-digit number using formal written layout **4LS24**, **4LS25**, **4LS34** 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 4LS6, **4LS7**, **4LS8**, 4LS13, 4LS24, 4LS27, 4LS35	recognise and show, using diagrams, families of common equivalent fractions **4LS23**, 4LS36 count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten **4LS16** 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 **4LS21**, 4LS22, **4LS36** add and subtract fractions with the same denominator **4LS20**, 4LS36 recognise and write decimal equivalents of any number of tenths or hundredths **4LS9**, **4LS16**, 4LS23, 4LS36 recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$ **4LS16**, 4LS23, 4LS36 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 **4LS9**, 4LS16 round decimals with one decimal place to the nearest whole number **4LS16**, 4LS17 compare numbers with the same number of decimal places up to two decimal places **4LS16**, 4LS17 solve simple measure and money problems involving fractions and decimals to two decimal places **4LS19**, 4LS21, **4LS22**

YEAR 4

Measurement	Geometry: properties of shapes	Geometry: position and direction	Statistics
Year 4 pupils should be taught to:			
convert between different units of measure [for example, kilometre to metre, hour to minute] 4LS9, **4LS10**, 4LS11, **4LS22** measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres 4LS10, **4LS13**, 4LS35 find the area of rectilinear shapes by counting squares **4LS35** estimate, compare and calculate different measures, including money in pounds and pence 4LS10, **4LS11**, **4LS18**, 4LS26, 4LS27 read, write and convert time between analogue and digital 12 and 24-hour clocks 4LS10, **4LS26**, 4LS27 solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days 4LS10, **4LS11**, 4LS21, **4LS26**, 4LS27	compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes **4LS14**, 4LS15, 4LS30, **4LS31**, 4LS32 identify acute and obtuse angles and compare and order angles up to two right angles by size **4LS30**, 4LS31, 4LS33 identify lines of symmetry in 2-D shapes presented in different orientations **4LS15** complete a simple symmetric figure with respect to a specific line of symmetry **4LS15**	describe positions on a 2-D grid as coordinates in the first quadrant **4LS32**, 4LS33 describe movements between positions as translations of a given unit to the left/right and up/down **4LS32**, 4LS33 plot specified points and draw sides to complete a given polygon **4LS33**	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs **4LS12**, **4LS27** solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs **4LS12**, 4LS26, **4LS27**

YEAR 5

Number and place value	Addition and subtraction	Multiplication and division	Fractions (including decimals and percentages)
Year 5 pupils should be taught to:			
read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit **5LS1**, 5LS4, 5LS8, 5LS9, 5LS10, 5LS38, 5LS40 count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 **5LS1**, 5LS8 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero **5LS2**, 5LS35, 5LS38 round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 **5LS1**, 5LS8, 5LS9, 5LS10 solve number problems and practical problems that involve all of the above **5LS1**, **5LS2**, 5LS4, **5LS8**, **5LS35** read Roman numerals to 1000 (M) and recognise years written in Roman numerals 5LS34, **5LS40**	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) **5LS9**, **5LS10**, 5LS11, 5LS16, 5LS35, 5LS38 add and subtract numbers mentally with increasingly large numbers 5LS1, 5LS2, **5LS9**, 5LS10, 5LS16, 5LS35, 5LS38 use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy **5LS2**, 5LS9, 5LS10, 5LS16, 5LS29, 5LS34, 5LS35, 5LS38 solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 5LS16, 5LS34, **5LS35**, 5LS38	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers **5LS5**, 5LS6, 5LS7, 5LS8, 5LS13, 5LS14, 5LS15, 5LS31 know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers **5LS6**, 5LS8, 5LS14, 5LS15 establish whether a number up to 100 is prime and recall prime numbers up to 19 5LS5, **5LS6**, 5LS8, 5LS14, 5LS15 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 **5LS11**, 5LS16, 5LS23, **5LS29**, **5LS30**, 5LS33, 5LS35 multiply and divide numbers mentally drawing upon known facts 5LS5, 5LS6, **5LS7**, **5LS8**, 5LS11, 5LS12, 5LS13, 5LS15, 5LS23, 5LS29, **5LS30**, 5LS31, 5LS33 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 **5LS12**, 5LS16, **5LS29**, **5LS30**, 5LS35 multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 **5LS4**, 5LS7, 5LS8, 5LS11, 5LS12, 5LS16, 5LS19, 5LS20, 5LS21, 5LS22, 5LS23, 5LS30, 5LS31, 5LS32, 5LS33, 5LS35, 5LS39 recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) 5LS20, **5LS21** solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes **5LS8**, 5LS12, 5LS13, 5LS20, 5LS21, 5LS23, **5LS29**, **5LS30**, 5LS31, 5LS33 solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign 5LS12, **5LS16**, **5LS29**, **5LS30**, 5LS31, 5LS32, 5LS33, **5LS35** solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates 5LS12, 5LS19, 5LS20, 5LS21, 5LS29, **5LS30**, **5LS31**, 5LS32	compare and order fractions whose denominators are all multiples of the same number **5LS14**, 5LS15, **5LS18**, 5LS22, 5LS23, 5LS30 identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths **5LS13**, 5LS14, 5LS15, 5LS17, **5LS18**, 5LS22, 5LS33 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] **5LS13**, 5LS14, 5LS15, 5LS17, **5LS18**, **5LS33** add and subtract fractions with the same denominator and multiples of the same number **5LS15**, **5LS18** multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams **5LS17**, **5LS18** read and write decimal numbers as fractions [for example, 0.71 = $\frac{71}{100}$] 5LS3, 5LS22, **5LS23**, **5LS33** recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents **5LS3**, 5LS13 round decimals with two decimal places to the nearest whole number and to one decimal place **5LS3**, 5LS10 read, write, order and compare numbers with up to three decimal places **5LS3**, 5LS30 solve problems involving number up to three decimal places **5LS3** 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 **5LS22**, **5LS23**, 5LS33 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 with a denominator of a multiple of 10 or 25 **5LS23**, **5LS33**

YEAR 5

Measurement	Geometry: properties of shapes	Geometry: position and direction	Statistics
Year 5 pupils should be taught to:			
convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) **5LS19**, 5LS20, 5LS21, 5LS22, 5LS26, 5LS31, **5LS32**, **5LS34**, 5LS36, 5LS39 understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints 5LS20, **5LS32**, 5LS39 measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres **5LS26**, 5LS37 calculate and compare the area of rectangles (including squares) using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes **5LS20**, 5LS21, 5LS26, 5LS37 estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] **5LS21** solve problems involving converting between units of time **5LS19**, **5LS34**, 5LS38 use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling **5LS19**, 5LS20, 5LS21, 5LS26, **5LS31**, **5LS32**	identify 3-D shapes, including cubes and other cuboids, from 2-D representations **5LS24** know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles **5LS27**, 5LS28, 5LS36 draw given angles, and measure them in degrees (°) **5LS27**, 5LS28, 5LS36 identify: - angles at a point and one whole turn (total 360°) - angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) - other multiples of 90° 5LS27, **5LS28**, 5LS37 use the properties of rectangles to deduce related facts and find missing lengths and angles 5LS20, 5LS21, 5LS24, 5LS25, 5LS26, 5LS27, 5LS28, **5LS37** distinguish between regular and irregular polygons based on reasoning about equal sides and angles **5LS36**, 5LS37	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 **5LS25**	solve comparison, sum and difference problems using information presented in a line graph **5LS38**, 5LS39 complete, read and interpret information in tables, including timetables 5LS2, **5LS34**, **5LS35**, **5LS39**

YEAR 6

Number and place value	Addition, subtraction, multiplication and division	Fractions (including decimals and percentages)
Year 6 pupils should be taught to:		
read, write, order and compare numbers up to 10 000 000 and determine the value of each digit **6LS1**, 6LS2 round any whole number to a required degree of accuracy **6LS1** use negative numbers in context, and calculate intervals across zero **6LS1**, 6LS20 solve number and practical problems that involve all of the above **6LS1**, **6LS35**	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication **6LS6**, 6LS31 divide numbers up to 4 digits by a two-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 **6LS17**, 6LS31 divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context **6LS8**, 6LS31 perform mental calculations, including with mixed operations and large numbers **6LS3**, 6LS4, 6LS5, 6LS6, 6LS8, 6LS9, 6LS10, 6LS11, 6LS12, 6LS13, 6LS14, 6LS17, 6LS18, 6LS21, 6LS23, 6LS25, 6LS29, 6LS31 identify common factors, common multiples and prime numbers **6LS5**, 6LS9, 6LS11, 6LS12, 6LS21, 6LS23, 6LS24 use their knowledge of the order of operations to carry out calculations involving the four operations 6LS3, 6LS4, **6LS16**, 6LS28, 6LS31 solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why **6LS4**, 6LS16, 6LS23, 6LS24, 6LS29 solve problems involving addition, subtraction, multiplication and division **6LS4**, 6LS7, 6LS8, 6LS14, 6LS16, 6LS17, 6LS21, 6LS23, 6LS24, 6LS25, 6LS28, 6LS29, **6LS31**, **6LS34**, **6LS35** use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy 6LS4, 6LS8, 6LS10, 6LS14, 6LS17, **6LS31**, 6LS35	use common factors to simplify fractions; use common multiples to express fractions in the same denomination **6LS9**, 6LS10, 6LS11, 6LS12, 6LS21, 6LS22, **6LS23** compare and order fractions, including fractions >1 **6LS10**, **6LS23** add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions **6LS11**, 6LS21, **6LS23**, 6LS27 multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$] **6LS21**, **6LS23** divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$] **6LS22**, **6LS23** associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$] **6LS8**, **6LS12**, 6LS13, 6LS17, 6LS22 identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places 6LS1, **6LS2**, 6LS8, 6LS17, 6LS26, 6LS31 multiply one-digit numbers with up to two decimal places by whole numbers **6LS6** use written division methods in cases where the answer has up to two decimal places **6LS8**, 6LS17 solve problems which require answers to be rounded to specified degrees of accuracy **6LS17** recall and use equivalences between simple fractions, decimals and percentages, including in different contexts 6LS8, 6LS9, **6LS12**, **6LS13**, 6LS14, 6LS17, 6LS23, 6LS27, 6LS32

YEAR 6

Ratio and proportion	Algebra	Measurement	Geometry: properties of shapes	Geometry: position and direction	Statistics
Year 6 pupils should be taught to:					
solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts 6LS16, **6LS24** solve problems involving the calculation of percentages [for example, of measures such as 15% of 360] and the use of percentages for comparison 6LS13, **6LS14**, 6LS27, 6LS32, 6LS33 solve problems involving similar shapes where the scale factor is known or can be found **6LS24**, 6LS30 solve problems involving unequal sharing and grouping using knowledge of fractions and multiples **6LS24**, 6LS33	use simple formulae 6LS15, **6LS16**, 6LS16, 6LS20, 6LS24, 6LS25, 6LS28, **6LS34** generate and describe linear number sequences **6LS28**, **6LS34** express missing number problems algebraically 6LS3, **6LS16**, 6LS19, 6LS20, 6LS25, 6LS28 find pairs of numbers that satisfy an equation with two unknowns 6LS25, **6LS28** enumerate possibilities of combinations of two variables **6LS16**, **6LS28**	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate 6LS1, 6LS2, 6LS14, 6LS15, 6LS18, 6LS24, **6LS26**, 6LS29, **6LS30**, 6LS35 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 6LS1, 6LS15, 6LS18, 6LS25, **6LS26**, 6LS29, **6LS30** convert between miles and kilometres **6LS26**, 6LS27 recognise that shapes with the same areas can have different perimeters and vice versa **6LS18** recognise when it is possible to use formulae for area and volume of shapes 6LS18, **6LS25**, **6LS30** calculate the area of parallelograms and triangles **6LS7**, 6LS16 calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units [for example mm^3 and km^3] **6LS25**	draw 2-D shapes using given dimensions and angles 6LS15, 6LS18, 6LS19, 6LS20, **6LS30** recognise, describe and build simple 3-D shapes, including making nets **6LS15**, 6LS25 compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons **6LS15**, 6LS19, 6LS20, 6LS25, **6LS30** illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius **6LS15**, 6LS27, 6LS32 recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles **6LS19**, 6LS27, 6LS32	describe positions on the full coordinate grid (all four quadrants) **6LS20** draw and translate simple shapes on the coordinate plane, and reflect them in the axes **6LS20**	interpret and construct pie charts and line graphs and use these to solve problems 6LS23, **6LS27**, **6LS32**, **6LS33**, 6LS35 calculate and interpret the mean as an average **6LS29**, **6LS33**