Age related Year 1	Entering 4	Developing 5	Secure 6
Number – number and place value	• Count in multiples of two • Count to and across 20, forwards and backwards, beginning with 0 or 1, or from any given number • Children estimate a number of objects and check quantities by counting up to 20 • Given a number, identify one more and one less • Order numbers 1 - 20 • Read numbers from 1 to 20	• Count in multiples of two and ten • Count to and across 50, forwards and backwards, beginning with 0 or 1, or from any given number • Recognise and create repeating patterns with numbers, tallies, ten sticks • Begin to recognise the place value of numbers beyond 20 (tens and ones) • Read and write numbers from 1 to 20 in numerals and words • Identify odd and even numbers linked to counting in twos from 0 and 1.	• Count in multiples of two, five and ten • **Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number** • **Read and write numbers to 100 in numerals** • **Use the language of: equal to, more than, less than (fewer), most, least** • **Identify and represent numbers using objects and pictorial representations including the number line** • Solve word problems and practical problems involving all of the skills in entering and developing
Number – addition and subtraction	• Rapid recall of number bonds to five • Represent and use number bonds and related subtraction facts within 10 (can be with objects) • Add and subtract single digit numbers up to 10, including zero (using concrete objects and pictorial representations) e.g.; 5 + 6 = 9+ 8= • Double single digits using repeated addition 4 + 4 = (up to 5)	• Represent and use number bonds and related subtraction facts within 10 • Solve one-step word problems (using objects and pictorial representations). • Add and subtract one-digit numbers to the number 10, including zero (using concrete objects and pictorial representations) e.g.; 10 +2 = or 2 +10 = • Double single digits using repeated addition 8 + 8 = (up to 10)	• Represent and use number bonds and related subtraction facts within 20 • **Add and subtract one-digit and two-digit numbers to 20, including zero (using concrete objects and pictorial representations)** • Solve one-step problems that involve missing number problems such as 7 = ☐ - 9 • **Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs**
Number – multiplication and division	• Double numbers to 10 using objects Double 2 is _____ Double 8 is _____ • Making statements using lots of = 3 lots of ten makes ____	• Double numbers to 10 using arrays and pictorial representations • Half numbers from 20 using objects, pictures and arrays	• **Recall and use doubles of all numbers to 10 and corresponding halves.** • 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.

Key Learning Indicators **Maths** **Year 1**

Age related Year 1	Entering	Developing	Secure
Number – fractions	• Recognise, find and name a half as one of two equal parts of a shape • Understand that a unit fraction represents one equal part of a whole.	• Recognise and find half as one of two equal groups of a quantity • Recognise, find and name a quarter as one of four equal parts of a shape • **Understand that a fraction can describe part of a whole.**	• **Recognise, find and name a half as one of two equal parts of an object shape or quantity (including measure)** • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity (including measure).
Geometry – properties of shapes	• **Recognise and name common 2-D shapes, including rectangles (including squares), circles and triangles.**	• **Recognise and name common 3-D shapes, including cuboids (including cubes), pyramids and spheres.**	
Geometry – position and direction	• Recognise and create repeating patterns with objects and shapes. • Describe direction, forwards, backwards	• Describe position – above, below, next to, beside, in between, in front, middle, side	• Describe movement, including whole, half, quarter and three-quarter turns. • Describe direction, left, right
Statistics	• Present and interpret data in block diagrams using practical equipment. • Ask and answer simple questions by counting the number of objects in each category	• Present and interpret data in pictograms • **Sort objects and shapes to a given criterion and their own**	• Ask and answer questions by comparing categorical data. • Convince me **using the language of equal to, more than, less than (fewer), most, least**
Measurement	• Measure and begin to record: - Lengths and heights, using non-standard and then manageable standard units (m/cm) • Recognise and know the value of different denominations of coins. • Sequence days of the week in chronological order • Tell the time to the hour • Make simple comparisons using mathematical language related to measures e.g long/ longer/ full, empty, half full, heavier, lighter than, quicker, faster, slowest.	• Measure and begin to record: - Capacity and volume using non-standard and then standard units (litres/ml) • Sequence events in chronological order using language (before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. • Sequence months of the year • **Tell the time to the hour and draw the correct hands on a clock face to show** • **Compare, describe and solve practical problems for: lengths and heights (long/short, longer/shorter, tall/short, double/half)**	• Measure and begin to record: - time (hours/minutes/seconds) within children's range of counting competence. • **Recognise and use language relating to dates, including days of the week, months and years.** • **Tell the time to half past the hour and draw the hands on a clock face to show** • **Recognise and know the value of different denominations of coins and notes.** • **Compare, describe and solve practical problems for: mass/weight (heavy/light, heavier than, lighter than)**

Key Learning Indicators **Maths** **Year 2**

Age related Year 2	Entering 7	Developing 8	Secure 9
Number – number and place value	• Count in steps of 2from 0, and in tens from any number, forward . and backward • **Recognise the place value of each digit in a two-digit number (tens, ones).** • **Find 1 or 10 more or less than a given number**	• Count in steps of 2and 5 from 0, and in tens from any number, forward and backward. • Read and write numbers to at least 100 in numerals and in words • **Identify, represent and estimate numbers using different representations, including the number line** • **Compare and order numbers from 0 up to 100; use <, > and = signs**	• Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. • Round numbers to at least 100 to the nearest 10 • Understand the connection between the 10 multiplication table and place value • Describe and extend simple sequences involving counting on or back in different steps • Use place value and number facts to solve problems • **Partition numbers in different ways (e.g. 23 = 20 + 3 and 23 = 10 + 13)**
Number – addition and subtraction	• Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • Understand subtraction as take away and difference (how many more, how many less/fewer) • **Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:** **a two-digit number and ones** **- a two-digit number and tens** • **Recall and use addition and subtraction facts to 20**	• **Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:** **- two two-digit numbers** **- adding three one-digit numbers** • **Solve problems with addition and subtraction - using concrete objects and pictorial representations, including those involving numbers**	• **Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.(bonds totalling 5, 10, and 20)** • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. • Select a mental strategy appropriate for the numbers involved in the calculation. • Recall and use number bonds for multiples of 5 totalling 60 (to support telling time to nearest 5 minutes) • Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting) • **Solve problems with addition and subtraction including with missing numbers:** **- using concrete objects and pictorial representations, including those involving numbers, quantities and measures** - applying their increasing knowledge of mental and written methods
Number – multiplication and division	• **Understand multiplication as repeated addition and arrays** • **Understand division as sharing and grouping and that a division calculation can have a remainder.** • Derive and use doubles of simple two-digit numbers (numbers in which the ones total less than 10) • **Recall and use multiplication facts for the 2, 10 multiplication tables**	**Derive and use halves of simple two-digit even numbers (numbers in which the tens are even)** • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • recognising odd and even numbers • **Recall and use multiplication and division facts for the 2 and10 multiplication tables**	• Solve problems involving multiplication and division (including those with remainders), using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. • **Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables** • **Calculate mathematical statements for multiplication using repeated addition) and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs**
Number – fractions	• Understand and use the terms numerator and denominator • Write simple fractions (example, $\frac{1}{2}$ of 6 = 3) • **Understand that a fraction can describe part of a set.** • **Recognise, find, name and write fractions , $\frac{1}{4}$, $\frac{2}{4}$ and of a length, shape, set of objects or quantity**	• **Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be.** • **Recognise, find, name and write fractions , $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity**	• Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ • **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** • Count on and back in steps of $\frac{1}{2}$ and $\frac{1}{4}$

Key Learning Indicators **Maths** **Year 2**

Age related Year 2	Entering 7	Developing 8	Secure 9
Geometry – properties of shapes	• **Identify and describe the properties of 2-D shapes, including the number of sides.**	• **Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.** • Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]	• **Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces**
Geometry – position and direction	• Order/arrange combinations of mathematical objects in patterns/sequences	• **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	• **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 including clockwise and anti-clockwise.
Statistics	• Compare and sort objects, numbers and common 2-D and and everyday objects • Interpret simple pictograms, tally charts, block diagrams • Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.	• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. • Compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects	• **Ask and answer questions about totalling and comparing categorical data.**
Measurement	• Recognise and use symbols for pounds (£) and pence (p) • **Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); the nearest appropriate unit, using rulers, scales,** • **Tell and write the time, quarter past the hour and draw the hands on a clock face to show the times**	• Compare and order lengths, mass, volume/capacity and record the results using >, < and = • **Know the number of minutes in an hour and the number of hours in a day**. • **Tell and write the time, including quarter past/to the hour and draw the hands on a clock face to show these times.** • Compare and sequence intervals of time • Combine amounts to make a particular value • **Find different combinations of coins that equal the same amounts of money.**	• **Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity and volume (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels** • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change and measures (including time)# • **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**

Age related Year 3	Entering 10	Developing 11	Secure 12
Number – number and place value	▪ **Read and write numbers up to 1000 in numerals** and in words. ▪ **Identify, represent and estimate numbers using different representations (including the number line).** ▪ **Partition numbers in different ways (e.g. 146 = 100+ 40+6 and 146 = 130+16).** ▪ **Compare and order numbers up to 1000.** ▪ **Find 1, 10 or 100 more or less than a given number.** ▪ **Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).**	▪ Count from 0 in multiples of 4, 8, 50 and 100. ▪ Count up and down in tenths. ▪ Read and write numbers with one decimal place. ▪ Identify the value of each digit to one decimal place. ▪ **Round numbers to at least 1000 to the nearest 10 or 100.** ▪ Describe and extend number sequences involving counting on or back in different steps.	▪ Compare and order numbers with one decimal place. ▪ **Find the effect of multiplying a one- or two-digit number by 10 and 100, identify the value of the digits in the answer.** ▪ Read Roman numerals from I to XII. ▪ Solve number problems and practical problems involving these ideas.
Number – addition and subtraction	▪ **Recall/use addition/subtraction facts for 100 (multiples of 5 and 10).** ▪ Derive and use addition and subtraction facts for 100. ▪ Derive and use addition and subtraction facts for multiples of 100 totalling 1000. ▪	▪ Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context. ▪ **Add and subtract numbers mentally, including:** **- a three-digit number and ones.** **- a three-digit number and tens.** **- a three-digit number and hundreds.** ▪ Select a mental strategy appropriate for the numbers involved in the calculation.	▪ **Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).** ▪ Estimate the answer to a calculation and use inverse operations to check answers. ▪ Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.
	▪ **Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.**		
Number – multiplication and division	▪ **Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.** ▪ **Derive and use doubles of all numbers to 100 and corresponding halves.**	▪ Understand that division is the inverse of multiplication and vice versa. ▪ Understand how multiplication and division statements can be represented using arrays. ▪ Understand division as sharing and grouping and use each appropriately. ▪ Derive and use doubles of all multiples of 50 to 500. ▪	▪ **Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).** ▪ Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Solve problems, including missing number problems, involving multiplication and division (and interpreting remainders), including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.
	▪ **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.**		
Number – fractions	• ***Understand that finding a fraction of an amount relates to division.*** • **Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.** • **Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.**	• *Show practically or pictorially that a fraction is one whole number divided by another (e.g. $\frac{3}{4}$ can be interpreted as 3 ÷ 4).* • **Compare and order unit fractions, and fractions with the same denominators *(including on a number line).*** • Recognise that tenths arise from dividing objects into 10 equal parts and in dividing one-digit numbers or	• **Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$].** • **Recognise and show, using diagrams, equivalent fractions with small denominators.** • *Count on and back in steps of $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{3}$.* • Solve problems that involve all of the above.

Age related Year 3	Entering 10	Developing 11	Secure 12
Geometry – properties of shapes	• Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. •	• **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.** • **Recognise angles as a property of shape or a description of a turn.**	• **Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.**
Geometry – position and direction	• *Describe positions on a square grid labelled with letters and numbers.*		
Statistics	▪ Interpret and present data using bar charts, pictograms and tables.	• ***Use sorting diagrams to compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects.*** •	• **Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.**
Measurement	▪ ***Continue to recognise and use the symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds/pence.*** ▪ **Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.** ▪ *Continue to estimate and measure temperature to the nearest degree (°C) using thermometers.* ▪	▪ **Add and subtract amounts of money to give change, using both £ and p in practical contexts.** ▪ **Estimate/read time with increasing accuracy to the nearest minute.** ▪ Know the number of seconds in a minute and the number of days in each month, year and leap year. ▪ ***Understand perimeter is a measure of distance around the boundary of a shape.*** ▪ Measure the perimeter of simple 2-D shapes.	▪ Compare durations of events [for example to calculate the time taken by particular events or tasks]. Record/compare time in terms of seconds, minutes, hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon, midnight. ▪ *Solve problems involving money and measures and simple problems involving passage of time.* ▪ *Recognise that ten 10p coins equal £1 and that each coin is $\frac{1}{10}$ of £1.* ▪ Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).

Age related Year 4	Entering 13	Developing 14	Secure 15
Number – number and place value	• Count in multiples of 6, 7, 8, 9, 25 and 1,000 • Count up and down in hundredths • **Read and write numbers to at least 10,000** • **Order and compare numbers beyond 1,000** • **Round any number to the nearest 10, 100 or 1,000** • **Find the effect of dividing a One- or two- digit number by 10 and 100, identifying the value of the digits in the answer** • **Identify the value of each digit in a four-digit number**	• Count backwards through zero to include negative numbers • Read and write numbers with two decimal places • **Find 0.1, 1, 10, 100 or 1,000 more or less than a given number** • **Identify, represent and estimate numbers using different representations (including the number line)** • **Order and compare numbers with the same number of decimal places up to two decimal places** • Read roman numerals to 100 and know that over time, the numeral system changed to include the concept of zero and place value	• Partition numbers in different ways (e.g.2.3 = 1.3 + 1 or 2.3 = 2+0.3) • Describe and extend number sequences involving counting on or back in different steps, including sequences with multiplication and division steps • Round decimals (one decimal place) to the nearest whole number • Solve number and practical problems that involve all of the above and with increasingly large positive numbers
Number – addition and subtraction	• *Select a mental strategy appropriate for the numbers involved in the calculation.* • **Recall and use addition and subtraction facts for 100.** • **Add and subtract numbers with up to 4 digits *and decimals with one decimal place* using the formal written methods of columnar addition and subtraction where appropriate.**	• Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) • **Estimate; use inverse operations to check answers to a calculation.** • **Recall and use +/- facts for multiples of 100 totalling 1000.**	• Derive and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place). • **Add and subtract mentally combinations of two and three digit numbers and decimals to one decimal place.** • Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. • Solve addition and subtraction problems involving missing numbers.
Number – multiplication and division	• **Use partitioning to double or halve any number, including decimals to one decimal place.** • **Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.** • **Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.** • **Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).**	• **Divide numbers up to 3 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.** • Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, division (including interpreting remainders), integer scaling problems and harder correspondence problems such as n objects are connected to m objects.	• Recognise and use factor pairs and commutativity in mental calculations. • **Recall multiplication and division facts for multiplication tables up to 12 × 12.** • 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.
Number – fractions	• Understand that a fraction is one whole number divided by another (e.g. $\frac{3}{4}$ can be interpreted as 3 ÷ 4). • Compare and order unit fractions and fractions with the same denominators (including on a number line).	• **Recognise and show, using diagrams, families of common equivalent fractions.** • **Recognise and write decimal equivalents of any number of tenths or hundredths.** • 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. • Solve simple measure and money problems involving fractions and decimals to two decimal places.	• **Recognise, find and write fractions of a discrete set of objects including those with a range of numerators and denominators.** • **Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.** • Count on and back in steps of unit fractions. • Recognise and write decimal equivalents to $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$. • **Add and subtract fractions with the same denominator (using diagrams).**

Key Learning Indicators **Maths** **Year 4**

Age related Year 4	Entering 13	Developing 14	Secure 15
Geometry – properties of shapes	• **Identify lines of symmetry in 2-D shapes presented in different orientations.** • Complete a simple symmetric figure with respect to a specific line of symmetry.	• **Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.** • **Identify acute and obtuse angles and compare and order angles up to two right angles by size.**	• Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
Geometry – position and direction	• Describe movements between positions as translations of a given unit to the left/right and up/down.	• Plot specified points and draw sides to complete a given polygon.	• **Describe positions on a 2-D grid as coordinates in the first quadrant.**
Statistics	• Use a variety of sorting diagrams to compare and classify numbers and geometric shapes based on their properties and sizes.	• **Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts, time graphs.**	• Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.
Measurement	• **Estimate, compare and calculate different measures, including money in pounds and pence.** • Order temperatures including those below 0°C. • Find the area of rectilinear shapes by counting squares. • **Write amounts of money using decimal notation.**	• Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. • **Know area is a measure of surface within a given boundary.** • Recognise that one hundred 1p coins equal £1 and that each coin is $\frac{1}{100}$ of £1.	• **Convert between different units of measure [e.g. kilometre to metre; hour to minute].** • **Read, write and convert time between analogue and digital 12- and 24-hour clocks.** • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days and problems involving money and measures.

Age related Year	Entering 16	Developing 17	Secure 18
Number – number and place value	▪ Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. ▪ **Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.** ▪ **Identify represent and estimate numbers using the number line.** ▪ **Find 0.01, 0.1, 1, 10, 100, 100 and other powers of 10 more or less than a given number.** ▪ Read Roman numerals to 1000 (M); recognise years written as such.	▪ Count forwards and backwards in decimal steps. ▪ **Read, write, order and compare numbers with up to 3 decimal places.** ▪ **Identify the value of each digit to three decimal places.** ▪ **Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.** ▪ **Multiply/divide whole numbers and decimals by 10, 100 and 1000.** ▪ **Interpret negative numbers in context, count on and back with positive and negative whole numbers, including through zero.** ▪ Describe and extend number sequences including those with multiplication/division steps and where the step size is a decimal.	▪ Round decimals with two decimal places to the nearest whole number and to one decimal place. ▪ Solve number and practical problems that involve all of the objectives in this strand.
Number – addition and subtraction	▪ **Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).** ▪ Select a mental strategy appropriate for the numbers involved in the calculation. ▪ **Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place).** ▪ **Add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction).** ▪ Solve addition and subtraction problems involving missing numbers.	▪ Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places). ▪ **Add and subtract numbers mentally with increasingly large numbers.** ▪ Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. ▪ **Solve addition and subtraction multi-step problems in contexts,**	▪ **Add and subtract numbers mentally with increasingly large numbers and decimals to two decimal places.** ▪ **Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.**

Number – multiplication and division	• **Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).** ▪ **Use partitioning to double or halve any number, including decimals to two decimal places.** ▪ **Multiply and divide numbers mentally drawing upon known facts.** ▪ **Multiply numbers up to 4 digits by a one- digit number using a formal written method,** ▪ **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.** ▪ Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy.	• **Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.** ▪ **Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method,** ▪ Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	• 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. ▪ Recognise and use square (^{2}) and cube (^{3}) numbers, and notation. ▪ **Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.** ▪ **Multiply numbers up to 4 digits by a two-digit number using a formal written method, including long multiplication for two-digit numbers.** ▪ Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.
Number – fractions, decimals, percentages	Read and write decimal numbers as fractions (e.g. $0.71=\frac{71}{100}$). ▪ **Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.** ▪ Write statements > 1 as a mixed number (e.g. $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$).	▪ Compare and order fractions whose denominators are all multiples of the same number (including on a number line). ▪ **Recognise mixed numbers and improper fractions and convert from one form to the other.** ▪ Count on and back in mixed number steps such as $1\frac{1}{2}$. ▪ **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 involving fractions and decimals to three places.	▪ **Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.** ▪ **Add and subtract fractions with denominators that are the same and that are multiples of the same number (using diagrams).** ▪ Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. ▪ 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 fractions with a denominator of a multiple of 10 or 25.

Age related Year	Entering 16	Developing 17	Secure 18
Geometry – properties of shapes	▪ **Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.** ▪ Identify 3-D shapes from 2-D representations. ▪ Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.	▪ **Identify:** **- angles at a point and one whole turn (total 360°).** **- angles at a point on a straight line and half a turn (total 180°).** ▪ Use the properties of rectangles to deduce related facts and find missing lengths and angles. ▪ **Draw given angles, and measure them in degrees (°).**	▪ **Identify:** **- angles at a point and one whole turn (total 360°).** **- angles at a point on a straight line and half a turn (total 180°).** - other multiples of 90°. ▪ **Draw given angles, and measure them in degrees (°).**
Geometry – position and direction	▪ Describe positions on the first quadrant of a coordinate grid.	▪ **Plot specified points and complete shapes.**	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.
Statistics	▪ **Complete, read and interpret information in tables**	▪ **Complete, read and interpret information in tables and timetables.** ▪ Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes). ▪ Solve comparison, sum and difference problems using information presented in a line graph.	▪ Solve comparison, sum and difference problems using information presented in all types of graph including a line graph. ▪ Calculate and interpret the mode, median and range.
Measurement	▪ Use, read and write standard units of length and mass. ▪ Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks. ▪ Solve problems involving converting between units of time.	▪ **Estimate *(and calculate)* volume ((e.g., using 1 cm^3 blocks to build cuboids (including cubes)) and capacity (e.g. using water).** ▪ Continue to order temperatures including those below 0°C. ▪ Measure/calculate the perimeter of composite rectilinear shapes. ▪ **Calculate and compare the area of rectangle, use standard units square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes.**	▪ **Convert between different units of metric measure.** ▪ **Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.** ▪ **Use all four operations to solve problems involving measure using decimal notation, including scaling.** ▪ Understand the difference between liquid volume and solid volume.

Age related Year 6	Entering 19	Developing 20	Secure 21
Number – number and place value	▪ **Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.** ▪ **Identify the value of each digit to 3 decimal places.** ▪ **Order and compare numbers including integers and decimals.** ▪ Round any whole number to a required degree of accuracy ▪ **Use negative numbers in context, and calculate intervals across zero**	▪ Count forwards or backwards in steps of integers, decimals, powers of 10 ▪ Order and compare numbers including negative numbers ▪ **Find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more/less than a given number** ▪ **Round decimals with three decimal places to the nearest whole number or one or two decimal places** ▪ **Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places** ▪ **Describe and extend number sequences including those with multiplication and division steps, inconsistent steps, alternating steps and those where the step size is a decimal**	▪ Solve number and practical problems that involve all aspects of place value
Number – addition and subtraction	▪ **Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)** ▪ Select a mental strategy appropriate for the numbers in the calculation ▪ **Add and subtract whole numbers and decimals using formal written methods (columnar addition and subtraction)** ▪ Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	▪ **Perform mental calculations including with mixed operations and large numbers and decimals** ▪ **Recall and use addition and subtraction facts for 1 (with decimals to two decimal places)**	▪ **Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why** ▪ Solve problems involving all four operations, including those with missing numbers
Number – multiplication and division	▪ **Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)** ▪ Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy ▪ Identify common factors, common multiples ▪ Use partitioning to double or halve any number	▪ Identify prime numbers ▪ **Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication** ▪ **Multiply one-digit numbers with up to two decimal places by whole numbers** ▪ **Divide numbers up to 4 digits by a two-digit whole number using the formal written methods of short or long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context**	▪ **Use written division methods in cases where the answer has up to two decimal places** ▪ **Solve problems involving all four operations, including those with missing numbers** ▪ Use knowledge of the order of operations to carry out calculations (working with brackets ▪ **Perform mental calculations, including with mixed operations and large numbers**
Number – fractions	▪ Compare and order fractions, including fractions > 1 (including on a number line) ▪ **Use common factors to simplify fractions; use common multiples to express fractions in the same denomination** ▪ Find simple percentages of amounts	▪ **Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts** ▪ Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375 and $\frac{3}{8}$) ▪ **Solve problems involving the calculation of percentages (e.g. of measures and such as 15% of 260) and the use of percentages for comparison** ▪ Solve problems involving fractions ▪ Solve problems which require answers to be rounded to specified degrees of accuracy	▪ **Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions** ▪ **Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$)** ▪ Divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)

Key Learning Indicators **Maths** **Year 6**

Age related Year 6	Entering 19	Developing 20	Secure 21
Geometry – properties of shapes	▪ Recognise, describe and build simple 3-D shapes, including making nets ▪ Compare/classify geometric shapes based on the properties and sizes ▪ **Draw 2-D shapes using given dimensions and angles**	▪ **Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles** ▪ **Find unknown angles in any triangles, quadrilaterals, regular polygons**	▪ Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
Geometry – position and direction	▪ **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	
Statistics	▪ Continue to complete and interpret information in a variety of sorting diagrams (including sorting properties of numbers and shapes) ▪ Calculate and interpret the mean as an average	▪ Solve comparison, sum and difference problems using information presented in all types of graph ▪ Interpret and construct and line graphs	▪ Interpret and construct pie charts ▪ **Interpret and construct pie charts and line graphs and use these to solve problems**
Measurement	▪ **Use, read and write standard units of length, mass and time and use decimal notation to three decimal places.** ▪ Recognise that shapes with the same areas can have different perimeters and vice versa	▪ Convert between standard units of length, mass, volume and time using decimal notation to three decimal places ▪ Use read and write standard units of volume ▪ Calculate differences in temperature, including those that involved a positive and negative temperature ▪ **Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate**	▪ Convert between miles and kilometres ▪ Calculate the area of parallelograms and triangles ▪ Recognise when it is possible to use formulae for area and volume of shapes ▪ Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units (e.g. mm^3 and km^3)
Ratio and Proportion	▪ Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples ▪	▪ Solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication/division facts ▪	▪ Solve problems involving similar shapes where the scale factor is known or can be found
Algebra		▪ 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