Maths Progression Framework

Disciplinary Knowledge

		F2 Three and Four-Year-Olds Reception Early Learning Goals	Year 1	Year 2 Statutory Curriculum Guidance *Non-Statutory Curriculum Guidance* Teacher Assessment Framework	Year 3 Statutory Curriculum Guidance *Non-Statutory Curriculum Guidance*
Number and Place Value	Counting	• Recite numbers past 5. • Say one number for each item in order: 1,2,3,4,5. • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • Count objects, actions and sounds. • Count beyond ten. • Verbally count beyond 20, recognising the pattern of the counting system.	• To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. • To identify one more and one less than a given number. • To count in multiples of twos, fives and tens from different multiples to develop their recognition of patterns in the number system, including varied and frequent practice through increasingly complex questions. • To recognise and create repeating patterns with objects and with shapes.	• To count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	• *To continue to count in ones, tens and hundreds, so that pupils become fluent in the order and place value of numbers to 1000.* • *To count from 0 in multiples of 4, 8, 50 and 100.*

	Identifying, Representing and Estimating Numbers	• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Show "finger numbers' up to 5. • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals. • Subitise. Link the number symbol (numeral) with its cardinal number value. • Subitise (recognise quantities without counting) up to 5.			
	Reading and Writing numbers	• Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals. • Link the number symbol (numeral) with its cardinal number value.	• To read and write numbers from 1 to 20 in numerals and words. • To count, read and write numbers to 100 in numerals.	• To read and write numbers to at least 100 in numerals and in words.	• To read and write numbers up to 1000 in numerals and in words.

	Compare and Order Numbers	• Compare quantities using language: 'more than', 'fewer than'. • Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...' • Compare numbers. • Understand the 'one more than/one less than' relationship between consecutive numbers. • Compare quantities up to10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.		• To compare and order numbers from 0 up to 100; use <, > and = signs.	• To compare and order numbers up to 1000.
	Understanding Place Value	• Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to10. • Have a deep understanding of numbers to 10, including the composition of each number.		• To recognise the place value of each digit in a two-digit number (tens, ones) to *become fluent and apply their knowledge of numbers to reason with, discuss and solve problems.* • *To begin to understand zero as a place holder.*	• To recognise the place value of each digit in a three-digit number (hundreds, tens, ones) *and apply partitioning related to place value using varied and increasingly complex problems, building on work in year 2 (for example, 146 = 100 + 40 and 6, 146 = 130 + 16).*

	Solve Problems	• Solve real world mathematical problems with numbers up to 5. • Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'	• *To practise ordinal numbers and solve simple concrete problems.*	• To use place value and number facts to solve *related* problems *to develop fluency*.	• To solve number problems and practical problems involving these ideas.

Addition and Subtraction	Mental calculations	• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • Show 'finger numbers' up to 5. • Subitise. • Explore the composition of numbers to 10. • Automatically recall number bonds 0-5 and some to 10. • 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. • Have a deep understanding of numbers to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5.	• To add and subtract one-digit and two-digit numbers to 20, including zero. • *To realise the effect of adding or subtracting zero.*	• *To extend the language of addition and subtraction to include sum and difference.* • To show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • To add and subtract numbers using an efficient strategy, explaining their method verbally using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, add three one-digit numbers.	• To add and subtract numbers mentally, including: *two-digit numbers, where the answers could exceed 100,* a three-digit number and ones, a three-digit number and tens and a three-digit number and hundreds.

	Number bonds	• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Show 'finger numbers' up to 5. • Subitise. • Explore the composition of numbers to 10. • Automatically recall number bonds 0-5 and some to 10. • 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. • Have a deep understanding of numbers to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5.	• To *memorise*, represent and use number bonds and related subtraction facts within 20.	• To recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships. • To recall and use addition and subtraction facts to 20 *to become fluent in deriving associative facts (e.g. 10 – 7 = 3, 100 – 70 = 30)* and derive and use related facts up to 100.	
	Written Calculations		• To read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs.	• *To begin to record addition and subtraction in columns to support place value and prepare for formal written methods with larger numbers.*	• *To use the understanding of place value and partitioning to enable* adding and subtracting numbers with up to three digits, using formal written methods of columnar addition and subtraction *to become fluent*.

	Inverse Operations, Estimating and Checking Answers	• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Explore the composition of numbers to 10.		• To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	• To estimate the answer to a calculation and use inverse operations to check answers.
	Solve Problems	• Solve real world mathematical problems with numbers up to 5. • Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...' • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.	• To *discuss* and solve one-step problems *(in familiar practical contexts)* that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems. • *Problems include the terms: put together, add, altogether, total, take away, distance between, difference between, more than and less than, so that pupils develop the concept of addition and subtraction and are enabled to use these operations flexibly*.	• To 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.	
Multiplication and	Mental Calculations	• Explore the composition of numbers to 10. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.		• *To begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations.* • *To begin to relate multiplication and division facts to fractions and measures (e.g., 40 ÷ 2 = 20, 20 is a half of 40).*	• To 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 *efficient* mental *methods, for example, using commutativity and associativity,* and progressing to formal *reliable*

				• To show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot, *to develop multiplicative reasoning*.	written methods *of short multiplication and division*.
	Multiplication and Division Facts	• Explore the composition of numbers to 10. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly. • 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.	• *To make connections between arrays, number patterns, and counting in twos, fives and tens.* • *Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities*	• *To use a variety of language to describe multiplication and division.* • To count from 0 in multiples of 4, 8, 50 and 100. • To recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers and use them to solve simple problems, demonstrating an understanding of commutativity as necessary. • *To connect the 10 multiplication table to place value, and the 5 multiplication table to the divisions on the clock face.*	• To recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables *when they are calculating mathematical statements in order to improve fluency*. • *To connect the 2, 4 and 8 multiplication tables through doubling.*

	Written Calculation			• To calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. • *To begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations.*	• To 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 *efficient* mental *methods, for example, using commutativity and associativity,* and progressing to formal *reliable* written methods *of short multiplication and division. (included in mental calculation section)*
	Properties of Numbers	• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.			
	Solve Problems	• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.	• To 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.	• To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	• To solve *simple* problems *in contexts*, *deciding which of the four operations to use and why.* These include missing number problems, involving multiplication and division, including *measuring* and positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Fractions, Decimals and Percentages	Counting			• *To count in fractions up to 10, starting from any number and using the* $\frac{1}{2}$ *and* $\frac{2}{4}$ *equivalence on the number line.*	• To 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 ten.
	Recognising, Finding and Naming Fractions		• To recognise, find and name a half as one of two equal parts of an object, shape or quantity *by solving problems*. • To recognise, find and name a quarter as one of four equal parts of an object, shape or quantity *by solving problems*. • *To connect halves and quarters to the equal sharing and grouping of sets of objects and to measures, as well as recognising and combining halves and quarters as parts of a whole.*	• To recognise, find, name, identify and write fractions $\frac{13}{13}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ of a length, number, shape, set of objects or quantity and know that all parts must be equal parts of the whole. • *To connect unit fractions to equal sharing and grouping, to numbers when they can be calculated, and to measures, finding fractions of lengths, quantities, sets of objects or shapes. They meet* $\frac{1}{4}$ *as the first example of a non-unit fraction.*	• *To understand the relation between unit fractions as operators (fractions of), and division by integers.* • To recognise, *understand* and use fractions as numbers: unit fractions and non-unit fractions with small denominators *as numbers on the number line (going beyond 0 -1 and relating this to measure), and deduce relations between them, such as size and equivalence*. • To recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
	Comparing and Ordering Fractions				• To compare and order unit fractions, and fractions with the same denominators.

	Equivalence			• To write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence $\frac{2}{4}$ and $\frac{1}{2}$	• To recognise and show, using diagrams, equivalent fractions with small denominators.
Measurement	Describe, Measure, Compare and Solve (all Strands)	• Make comparisons between objects relating to size, length, weight and capacity. • Compare length, weight and capacity.	• To compare, describe and solve practical problems for: lengths and heights, mass/weight, capacity and volume, time. • To measure and begin to record the following: lengths and heights, mass/weight, capacity and volume, time. • *To move from using and comparing different types of quantities and measures using non-standard units, including discrete (for example, counting) and continuous (for example, liquid) measurement, to using manageable common standard units using measuring tools, such as a ruler, weighing scales and containers.*	• To choose and use appropriate standard units *with increasing accuracy using their knowledge of the number system* 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. • *To use the appropriate language and record using standard abbreviations.* • To compare and order lengths, mass, volume/capacity and record the results using >, < and =. • *To compare measures including simple multiples such as 'half as high'; 'twice as wide'.*	• To measure *using the appropriate tools and units*, compare (*including simple scaling by integers)* add and subtract *using mixed units*: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).

	Telling Time	• Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then...'	• To sequence events in chronological order using language. • To recognise and use language relating to dates, including days of the week, weeks, months and years. • To tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	• To read, tell and write the time to five minutes, including quarter past/to the hour/half hour and draw the hands on a clock face to show these times. • To become fluent in telling the time on analogue clocks and recording it. • To know the number of minutes in an hour and the number of hours in a day. • To compare and sequence intervals of time.	• To tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. • To begin to use digital 12-hour clocks and record their times in preparation for using digital 24-hour clocks in year 4. • To estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours. • To use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. • To know the number of seconds in a minute and the number of days in each month, year and leap year. • To compare durations of events.
Properties of Shapes	Recognise 2D and 3D Shapes and Their Properties	• Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. • Select, rotate and manipulate shapes in order to develop spatial reasoning skills	• To recognise, handle and name common 2D and 3D shapes in different orientations/sizes and relate everyday objects fluently. • To recognise that rectangles, triangles, cuboids and pyramids are not always similar to each other.	• Pupils read and write names for shapes that are appropriate for their word reading and spelling. • To handle, identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line. • To handle, identify and describe the properties of 3D	• To describe the properties of 2D and 3D shapes using accurate language. • To extend knowledge of the properties of shapes is extended at this stage to symmetrical and non-symmetrical polygon and polyhedron.

				shapes, including the number of edges, vertices and faces. • To identify 2D shapes on the surface of 3D shapes.	• To recognise 3D shapes in different orientations and describe them.
	Compare and Classify Shapes	• Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. • Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.		• To identify, compare and sort common 2D and 3D shapes and everyday objects on the basis of their properties and use vocabulary precisely	
	Drawing 2D Shapes and Constructing 3D Shapes	• Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. • Combine shapes to make new ones - an arch, a bigger triangle etc. • Select, rotate and manipulate shapes in order 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.		• *Pupils draw lines and shapes using a straight edge.*	• To connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts. • To identify horizontal and vertical lines and pairs of perpendicular and parallel lines. • To draw 2D shapes and make 3D shapes using modelling materials.

Position and direction	Position, Direction and Movement	• Understand position through words alone – for example, "The bag is under the table," – with no pointing. • Describe a familiar route. • Discuss routes and locations, using words like 'in front of' and 'behind'. • Draw information from a simple map.	• To describe position, direction and movement, including whole, half, quarter and three-quarter turns *in both directions and connect clockwise with the movement on a clock face*. • *To use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside.*	• To 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).	
	Patterns	• Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc. • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern. • Continue, copy and create repeating patterns.		• To order and arrange combinations of mathematical objects and *shapes, including those in different orientations,* in patterns and sequences.	
Statistics	Record, Present and Interpret Data			• *To record, interpret, collate, organise and compare information.* • To interpret and construct simple pictograms, tally	• To interpret and present data using bar charts, pictograms and tables *and use simple scales with increasing accuracy*.

				charts, block diagrams and simple tables *(e.g. many-to-one correspondence in pictograms with simple ratios 2, 5, 10 scales).* • To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. • To ask and answer questions about totalling and comparing categorical data.	

Key Vocabulary

F2
Zero – In a place value system, a placeholder. Example: 105, the cardinal number of an empty set **Number** – a set size or quantity represented by spoken label or written label **One to twenty** – digits representing quantities up to and including 20 **Quantity** – a set size **How many** – cardinal number representing a set size **Add** – term for the operation addition **Plus** - term for the operation addition **Subtract** – term for the operation of subtraction **Sum** – the whole when numbers are added together in an addition equation **Equals** – symbol to show equal value **Difference** – the remaining number (outcome) of a subtraction equation **More than** – a greater amount than a given number or set **Less than** – a lesser amount of a given number or set **Ones** – digits 1-9 **Tens** – first digit represented in a 2 digit number from over 9 **Digit** – 0 -9 representation in any number **Full** – showing a container full to capacity **Empty** – showing a container with nothing in it **Half full** – showing a container half full **Share** – give out objects so that they are shared fairly **Double** – get the same amount again and work out the total **Halve** – cut a set size of object in two so that there are 2 equal parts **Common 2d and 3d shapes** – a drawing of a 2d shape e.g. triangle, square, rectangle, circle: solid models of common 3d shapes e.g. cylinder, cube, cuboid, sphere **Sides** – lines representing the outline of a 2d shape **Faces** – surface of a 3d shape **Pattern** – regular repeated sequence of shapes or numbers **Days of the week** – Sunday to Saturday **Months of the year** – January to December
Year 1
In addition to F2…

Numbers to 100
Partition - To split a number into component parts. Example: the two-digit number 38 can be partitioned into 30 + 8 or 19 + 19.
Odd – numbers which can not be equally shared between 2: numbers ending in 1 3 5 7 9
Even - numbers which can be equally shared between 2: numbers ending in 1 3 5 7 9
Multiple - Example 10 and 15 are multiples of 5 because 2 x 5 = 10 3 x 5 = 15
Groups of – equal groups of number
Array – a representation in rows and columns
Repeated addition – adding the same number repeatedly
Commutative – numbers that do the same job e.g. factors in a multiplication equation
First, second, third etc. – ordinal numbers to show position in a series
Whole – a single amount or shape
Half – 2 equal parts of a whole
Quarters – 4 equal parts of a whole
Face – the flat surface of 3d shape
Edge – the joins on a 3d shape
Vertices – the points on a 2d and 3d shape
Sides – the outline of a 2d shape
O'clock – the start of 1 hour
Half past – 30 minutes into 1 hour
Minute – 60 seconds: unit of measurement for time
Hour – 60 minutes: unit of measurement for time
Longer – not as short as the object being compared
Shorter – not as long as the object being compared
Heavier – not as light as the object being compared
Lighter – not as heavy as the object being compared
Pence – unit of money

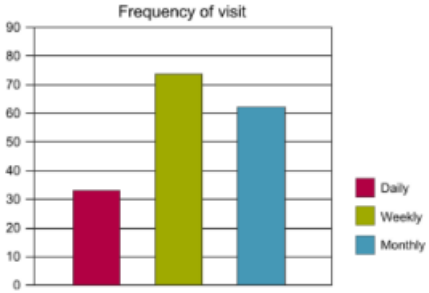
Year 2

In addition to F2 and Y1…

Array - An ordered collection of counters, numbers etc. in rows and columns.
Hundreds – the digit that represents hundreds
Represents – a model to show a number or a process
Inverse – the opposite operation to reverse an equation
Factor – a multiple of a number
Product – the outcome of a multiplication equation when 2 factors have been multiplied
Divide- to share into equal parts

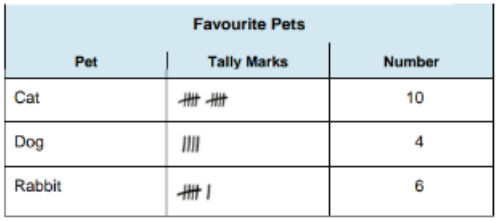
Quarter past – 15 minutes past o'clock
Quarter to – 15 minutes to the next o'clock
Minutes past – counting the minutes from o'clock to half past
Minutes to – counting the minutes towards the next o'clock
Hour hand – small hand that counts the hours
Minute hand – large hand that counts the minutes
Clockwise – with the direction of a clock
Anti-clockwise – against the direction of the clock
Degrees – a unit of measurement for temperature
Centimetre – a unit of measurement for length and height
Metre -– a unit of measurement for length and height
Gram – a unit of measurement for mass
Kilogram – a unit of measurement for mass
Millilitre – a unit of measurement for liquid
Litre – a unit of measurement for liquid
Symmetrical – a shape which can be folded together so that there is no overlapping
Line of symmetry - A line about which a geometrical figure, or shape, is symmetrical or about which a geometrical shape or figure is reflected in order to produce a symmetrical shape or picture.

Detailed Vocabulary List	
Vocabulary	**Definition**
Addition	• The operation where one number is added to another to form a third number. The result of the addition is called the sum or total. • The operation is denoted by the + sign. When we write 5 + 3 we mean 'add 3 to 5'; we can also read this as '5 plus 3'. • In practice the order of addition does not matter: The answer to 5 + 3 is the same as 3 + 5 and in both cases the sum is 8. This holds for all pairs of numbers and therefore the operation of addition is said to be commutative. • To add three numbers together, first two of the numbers must be added and then the third is added to this intermediate sum. • Addition is the inverse operation to subtraction, and vice versa. • There are two models for addition: ○ Augmentation is when one quantity or measure is increased by another quantity. i.e. "I had £3.50 and I was given £1, then I had £4.50".

	○ Aggregation is the combining of two quantities or measures to find the total. E.g. "I had £3.50 and my friend had £1, we had £4.50 altogether.
Array	• An ordered collection of counters, numbers etc. in rows and columns.
Line of symmetry	• A line about which a geometrical figure, or shape, is symmetrical or about which a geometrical shape or figure is reflected in order to produce a symmetrical shape or picture. • Reflective symmetry exists when for every point on one side of the line there is another point (its image) on the other side of the line which is the same perpendicular distance from the line as the initial point. • Example: a regular hexagon has six lines of symmetry; an equilateral triangle has three lines of symmetry.
Bar chart	• A format for representing statistical information. Bars, of equal width, represent frequencies and the lengths of the bars are proportional to the frequencies (and often equal to the frequencies). • Sometimes called bar graph. • The bars may be vertical or horizontal depending on the orientation of the chart. 
Block graph	• A simple format for representing statistical information. One block represents one observation. Example: A birthday graph where each child places one block, or colours one square, to represent himself / herself in the month in which he or she was born. 
Capacity	• Capacity – the volume of a material (typically liquid or air) held in a vessel or container.
Cardinal number	• A cardinal number denotes quantity, as opposed to an ordinal number which denotes position within a series. 1, 2, 5, 23 are examples of cardinal numbers • First (1st), second (2nd), third (3rd) etc denote position in a series, and are ordinals.

Carroll diagram	• A sorting diagram named after Lewis Carroll, author and mathematician, in which numbers (or objects) are classified as having a certain property or not having that property.
Commutative	• Addition and multiplication of real numbers are commutative where $a + b = b + a$ and $a \times b = b \times a$ It follows that, for example, $2 + 3 = 3 + 2$ and $2 \times 3 = 3 \times 2$. • Subtraction and division are not commutative since, as counter examples, $2 - 3 \neq 3 - 2$ and $2 \div 3 \neq 3 \div 2$
Difference	• The numerical difference between two numbers or sets of objects and is found by comparing the quantity of one set of objects with another. E.g. the difference between 12 and 5 is 7; 12 is 5 more than 7 or 7 is 5 fewer than 12. • Difference is one way of thinking about subtraction.
Digit	• One of the symbols of a number system most commonly the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. Examples: the number 29 is a 2-digit number; there are three digits in 2.95. The position or place of a digit in a number conveys its value.
Double	• To multiply by 2. Example: Double 13 is $(13 \times 2) = 26$. • The number or quantity that is twice another. Example: 26 is double 13. • In this context, a 'near double' is one away from a double. Example: 27 is a near double of 13 and of 14.
Edge	• A line segment, joining two vertices of a figure. Examples: a square has four edges; and a cuboid has twelve edges.
Equal	• Symbol: =, read as 'is equal to' or 'equals'. and meaning 'having the same value as'. Example: $7 - 2 = 4 + 1$ since both expressions, $7 - 2$ and $4 + 1$ have the same value, 5. • Avoid makes
Face	• One of the flat surfaces of a solid shape. Example: a cube has six faces; each face being a square
Factor	• When a number can be expressed as the product of the factors Examples: 1, 2, 3, 4, 6 and 12 are all factors of 12 because $12 = 1 \times 12 = 2 \times 6 = 3 \times 4$
Facts	• Multiplication / division/ addition/ subtraction facts. The word 'fact' is related to the four operations and the instant recall of knowledge about the composition of a number. i.e. an addition fact for 20 could be 10+10; a subtraction fact for 20 could be 20-9=11. A multiplication fact for 20 could be 4 x 5 and a division fact for 20 could be 20÷5 = 4.

Inverse operation	• Operations that, when they are combined, leave the entity on which they operate unchanged. Examples: addition and subtraction are inverse operations e.g. 5 + 6 – 6 = 5. Multiplication and division are inverse operations e.g. 6 × 10 ÷ 10 = 6.
Minus	• Name for the symbol −, representing the operation of subtraction.
Multiples	• Example 10 and 15 are multiples of 5 because 2 x 5 = 10 3 x 5 = 15
Multiplication	• Multiplication (often denoted by the symbol "×") is the mathematical operation of scaling one number by another. • Multiplication is commutative.
Number bond	• A pair of numbers with a particular total e.g. number bonds for ten are all pairs of whole numbers with the total 10.
Operation	+ - X ÷
Ordinal number	• A term that describes a position within an ordered set. Example: first, second, third, fourth … twentieth etc
Partition	• To separate a set into subsets. • To split a number into component parts. Example: the two-digit number 38 can be partitioned into 30 + 8 or 19 + 19.
Pattern	• A systematic arrangement of numbers, shapes or other elements according to a rule
Place value	• The value of a digit that relates to its position or place in a number. Example: in 1482 the digits represent 1 thousand, 4 hundreds, 8 tens and 2 ones respectively.
Plus	• A term for addition
Product	• The result of multiplying one number by another. Example: The product of 2 and 3 is 6 since 2 × 3 = 6.
Property	• Any attribute. Example: One property of a square is that all its sides are equal.
Repeated addition	• The process of repeatedly adding the same number or amount. One model for multiplication. Example 5 + 5 + 5 + 5 = 5 x 4.
Repeated subtraction	• The process of repeatedly subtracting the same number or amount. One model for division. Example 35 -5 - 5 - 5 - 5 - 5 - 5 = 0

<table>
<tr><td>Fraction</td><td>• A fraction where the numerator and denominator are both integers.</td></tr>
<tr><td>Subtract</td><td>• Carry out the process of subtraction</td></tr>
<tr><td>Subtraction</td><td>• The inverse operation to addition. Avoid take</td></tr>
<tr><td>Sum</td><td>• The result of one or more additions.</td></tr>
<tr><td>Take away</td><td>• Subtraction as reduction
• Remove a number of items from a set.</td></tr>
<tr><td>Tally</td><td>• Make marks to represent objects counted; usually by drawing vertical lines and crossing the fifth count with a horizontal or diagonal strike through.
• A Tally chart is a table representing a count using a Tally.
 
<table>
<tr><th colspan="3">Favourite Pets</th></tr>
<tr><th>Pet</th><th>Tally Marks</th><th>Number</th></tr>
<tr><td>Cat</td><td>𝍸 𝍸</td><td>10</td></tr>
<tr><td>Dog</td><td>𝍸</td><td>4</td></tr>
<tr><td>Rabbit</td><td>𝍸 |</td><td>6</td></tr>
</table></td></tr>
<tr><td>Vertex</td><td>• The point at which two or more lines intersect.
• Plural: vertices</td></tr>
<tr><td>Zero</td><td>• Nought or nothing; zero is the only number that is neither positive nor negative.
• Zero is needed to complete the number system. In our system of numbers: a – a = 0 for any number a etc
• In a place value system, a placeholder. Example: 105.
• The cardinal number of an empty set</td></tr>
</table>