PROGRESSION IN MATHEMATICS		
Date	**Review Date**	**Subject Leader**
January 2020	August 2020	Beverley Hall
This document aims to give guidance on the progression of Mathematical knowledge and skills across the year groups.		

	UFS	Year 1	Year 2
Number and Place Value	**Early Learning Goal Mathematics: Numbers** Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.	Pupils should be taught to: count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens given a number, identify one more and one less 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 read and write numbers from 1 to 20 in numerals and words.	Pupils should be taught to: count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward recognise the place value of each digit in a two-digit number (tens, ones) identify, represent and estimate numbers using different representations, including the number line compare and order numbers from 0 up to 100; use <, > and = signs read and write numbers to at least 100 in numerals and in words use place value and number facts to solve problems.
Vocabulary	zero number one, two, three … to twenty and beyond teens numbers, eleven, twelve … twenty none how many …? count, count (up) to, count on (from, to), count	Number Zero, one, two, three to twenty, and beyond None Count (on/up/to/from/ down) Before, after More, less, many, few, fewer, least, fewest, smallest, greater, lesser	Numbers to one hundred Hundreds Partition, recombine Hundred more/less

	back (from, to) count in ones, twos, fives, tens is the same as more, less odd, even few pattern pair Place value ones tens digit the same number as, as many as more, larger, bigger, greater fewer, smaller, less fewest, smallest, least most, biggest, largest, greatest one more, ten more one less, ten less compare order size first, second, third… twentieth last, last but one before, after next between estimating guess how many …? estimate nearly close to about the same as just over, just under too many, too few enough, not enough, add, more, and make, sum, total altogether double one more, two more … ten more how many more to make …? how many more is … than …? how much more is …? take away how many are left/left over? how many have gone? one less, two less, ten less … how many fewer is … than …? how much less is …? difference between, sharing doubling halving number patterns , parts of a whole half quarter	Equal to, the same as Odd, even, Pair Units, ones, tens Ten more/less Digit Numeral Figure(s) Compare (In) order/a different order Size Value Between, halfway between Above, below	

Number – Addition and Subtraction		Pupils should be taught to: read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs represent and use number bonds and related subtraction facts within 20 add and subtract one-digit and two-digit numbers to 20, including zero solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9.	Pupils should be taught 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 recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 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 show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot recognise and use the inverse relationship between addition and subtraction and use this to check

			calculations and solve missing number problems.
Vocabulary		Number bonds, number line Add, more, plus, make, sum, total, altogether Inverse Double, near double Half, halve Equals, is the same as (including equals sign) Difference between How many more to make..?, how many more is…than..?, how much more is..? Subtract, take away, minus How many fewer is…than..?, how much less is..?	
Number – Multiplication and Division		Pupils should be taught 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.	Pupils should be taught to: recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot

			• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Vocabulary		Odd, even Count in twos, threes, fives Count in tens (forwards from/backwards from) How many times? Lots of, groups of Once, twice, three times, five times Multiple of, times, multiply, multiply by Repeated addition, Array, row, column Double, halve Share, share equally Group in pairs, threes, etc. Equal groups of Divide, divided by, left, left over	
Number – Fractions		Pupils should be taught to: • recognise, find and name a half as one of two equal parts of an object, shape or quantity • recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	Pupils should be taught to: • recognise, find, name and write fractions 1/3 , ¼, 2/4 and ¾ of a length, shape, set of objects or quantity • write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of 2/4 and ½ .
Vocabulary		Whole Equal parts, four equal parts One half, two halves A quarter, two quarters	Three quarters, one third, a third Equivalence, equivalent

Measurements	**Early Learning Goal Mathematics: Shape, Space and Measures** Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.	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 [for example, full/empty, more than, less than, half, half full, quarter] time [for example, quicker, slower, earlier, later] measure and begin to record the following: lengths and heights mass/weight capacity and volume time (hours, minutes, seconds) recognise and know the value of different denominations of coins and notes sequence events in chronological order using language [for example, before and after, next, first, today,	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 compare and order lengths, mass, volume/capacity and record the results using >, < and = recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value find different combinations of coins that equal the same amounts of money solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change compare and sequence intervals of time tell and write the time to five minutes, including quarter past/to the hour and draw the

		yesterday, tomorrow, morning, afternoon and evening] recognise and use language relating to dates, including days of the week, weeks, months and years tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	hands on a clock face to show these times know the number of minutes in an hour and the number of hours in a day.
Vocabulary	MEASUREMENT measure size compare guess, estimate enough, not enough too much, too little too many, too few nearly, close to, about the same as just over, just under Length metre length, height, width, depth long, short, tall high, low wide, narrow thick, thin longer, shorter, taller, higher … and so on longest, shortest, tallest, highest … and so on far, near, close Weight weigh, weighs, balances heavy, light heavier than, lighter than heaviest, lightest scales Capacity and volume full empty half full holds container Time time days of the week, Monday, Tuesday … day, week birthday, holiday morning, afternoon, evening, night bedtime,	Full, half full, empty Holds Container Weigh, weighs, balances Heavy, heavier, heaviest, light, lighter, lightest Scales Time Days of the week: Monday, Tuesday, etc. Seasons: spring, summer, autumn, winter Day, week, month, year, weekend Birthday, holiday Morning, afternoon, evening, night, midnight Bedtime, dinnertime, playtime Today, yesterday, tomorrow Before, after Next, last Now, soon, early, late Quick, quicker, quickest, quickly , fast, faster, fastest, slow, slower, slowest, slowly Old, older, oldest, new, newer, newest Takes longer, takes less time Hour, o'clock, half past Clock, watch, hands How long ago?, how long will it be to…?, how long will it take to…?, how often?	Quarter past/to m/km, g/kg, ml/l Temperature (degrees)

	dinner time, playtime today, yesterday, tomorrow before, after next, last now, soon, early, late quick, quicker, quickest, quickly slow, slower, slowest, slowly old, older, oldest new, newer, newest takes longer, takes less time hour, o'clock clock, watch, hands Money money coin penny, pence, pound price, cost buy, sell spend, spent pay Shape shape, pattern flat curved, straight round hollow, solid sort make, build, draw size bigger, larger, smaller symmetrical pattern, repeating pattern match 2-D shape corner, side rectangle (including square) circle triangle 3-D shape face, edge, vertex, vertices cube pyramid sphere cone Position and direction position over, under above, below top, bottom, side on, in outside, inside around in front, behind front, back beside, next to opposite apart between middle, edge corner direction left, right up, down forwards, backwards,	Always, never, often, sometimes, usually Once, twice First, second, third, etc. Estimate, close to, about the, same as, just over, just under Too many, too few, not enough, enough Length, width, height, depth Long, longer, longest, short, shorter shortest, tall, taller, tallest, high, higher, highest Low, wide, narrow, deep, shallow, thick, thin Far, near, close Metre, ruler, metre stick Money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change, dear(er), costs more, costs less, cheaper, costs the same as How much?, how many? Total	

	sideways across next to, close, near, far along through to, from, towards, away from movement slide roll turn stretch, bend whole turn, half turn STATISTICS count, sort group, set list		
Geometry – Properties of Shapes		Pupils should be taught to: 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].	Pupils should be taught to: identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] compare and sort common 2-D and 3-D shapes and everyday objects.
Vocabulary		Group, sort Cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square Shape Flat, curved, straight, round Hollow, solid Corner (point, pointed) Face, side, edge Make, build, draw	Size Bigger, larger, smaller Symmetrical, line of symmetry Fold Match Mirror line, reflection Pattern, repeating pattern

Geometry – Position and Direction		Pupils should be taught to: describe position, direction and movement, including whole, half, quarter and three quarter turns.	Pupils should be taught to: order and arrange combinations of mathematical objects in patterns and 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 for quarter, half and three-quarter turns (clockwise and anticlockwise).
Vocabulary		Position Over, under, underneath, above, below, top, bottom, side on, in, outside, inside around, in front, behind Front, back Before, after Beside, next to, Opposite Apart Between, middle, edge, centre Corner.Direction Journey Left, right, up, down, forwards, backwards, sideways Across Close, far, near Along, through To, from, towards, away from Movement Slide, roll, turn, whole turn, half turn Stretch, bend	Rotation Clockwise, anticlockwise Straight line Ninety degree turn, right angle
Statistics			Pupils should be taught to:

			▯ interpret and construct simple pictograms, tally charts, block diagrams and simple tables ▯ ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ▯ ask and answer questions about totalling and comparing categorical data.
Vocabulary			Count, tally, sort Vote Graph, block graph, pictogram, Represent Group, set, list, table Label, title Most popular, most common, least popular, least common