Belmont MATHS: Number and Algebra Framework

	Number & Algebra
Stage 1	• I can pay attention to, and watch counting activities. • I can follow a counting sequence indicated by an adult. • I can give you objects. • I can match object to object • I can add more to a group of objects/pictures. • I can point to each object as we count them, with support. • I can indicate 'gone' or 'all gone' (through speech, signs, gesture). • I can show less by taking away objects/pictures • I can separate a small group of objects in different ways but recognise the total stays the same • I can say that if we add more the amount gets bigger and if we show less the amount gets smaller (objects and pictorially) • I can sort objects into groups with adult support
Stage 2	• I can identify and represent 1 physically and pictorially • I can identify the numeral for 1 and match it to the corresponding amount • I can identify and represent 2 physically and pictorially • I can identify the numeral for 2 and match it to the corresponding amount • I can identify and represent 3 physically and pictorially • I can identify the numeral for 3 and match it to the corresponding amount • I can point to each object as we count them. • I can order and compare the amounts and numerals 1, 2 and 3 • I can use the last number in a count to represent the number of objects in a set. • I can understand the compositions of 1, 2 and 3 • I can identify and represent 4 and 5 physically and pictorially • I can show 5 fingers with assistance • I can identify the numerals for 4 and 5 and match it to the corresponding amount • I can show my understanding of the composition of 4 and 5 • I can count forward to 5 and back from 5 • I can show 1 more and 1 less physically and pictorially to 5 and say how many now

	• I can recognise and understand the concept of a whole • I can put together parts to make a whole
Stage 3	• I can identify and represent zero physically and pictorially and using the numeral • I can compare numbers 0-5 physically, pictorially and numerically • I can identify and represent 6- 10 physically and pictorially • I can identify the numerals for 6-10 and match it to the corresponding amount • I can show my understanding of the composition of numbers 6-10 • I can write my numerals 0-10 with minimal support • I can count forward and back from 0-10 • I can sequence numerals to 10 forwards and backwards • I can show 1 more and 1 less physically, pictorially to 10 • I can show my understanding of the concepts too many, not enough and same when comparing amounts • I can recognise the effect of adding or taking away 0 • I can understand the part part whole model and use it to partition a small amount using objects/images • I can partition one amount in different ways using the part part whole model using objects/images • I can say or show that half is when something I split into 2 equal parts/same parts and that 2 halves make a whole • I can recognise, show half and explain half using objects and pictorially • I can recognise/ show that half can be shown in different ways • I can half a quantity using objects and pictorially
Stage 4	• I can compare two given numbers of objects/images/numerals saying which is more/less and greater than/less than and same/equal. • I can use the comparison symbols to compare amounts of objects/images/numerals • I can order 3 groups of objects/images/ 3 numerals from greatest to smallest to 10 • I can use ordinal numbers when describing the positions of objects/ images • I can show 1 more and 1 less and compare numbers using a number line • I can rote count to 20 with adult support • I can find the whole by adding together our parts using objects/ images • I can say or show that a quarter is when something is split into 4 equal/ same parts and 4 quarters make a whole • I can recognise, explain and show how I know it is in quarters regardless the orientation • I can show quarters using objects and pictures • I can quarter a quantity using objects/ pictures • I can recognise the symbols for a half and a quarter

Stage 5	• I can build numbers beyond ten (I have 1 ten and 3 ones) and name the number with adult support • I can identify and represent 0-20 physically and pictorially • I can identify the numerals to 20 and match it to the corresponding amount • I can show my understanding of the composition of numbers to 20 • I can write my numerals to 20 with minimal support • I can order my numerals to 20 • I can show/say how many tens and ones are in my numbers to 20 (objects and pictorially) • I can find 1 more and 1 less to 20 using objects, images and abstract resources (number lines) • I can compare numbers to 20 using comparative language and symbols (objects, images, numerals) • I can order 3 groups of objects/images/ 3 numerals from greatest to smallest to 20 • I can recognise and understand the addition symbol • I can recognise and understand the equals symbol • I can create number sentences from a part part whole model • I can create addition number sentences from first, then and now stories and bar models • I can recognise the equivalence of ½ and 2/4 • I can use objects and pictures to find 3 quarters • I can match and identify the mathematical symbols to the physical and pictorial amounts of ½, ¼, 2/4, ¾
Stage 6	• I can build numbers beyond 20 to 50 (I have 3 tens and 3 ones) and name the number with adult support • I can build a given number to 50 using objects and say how many tens and ones my number contains • I can count 0-50 forwards and backwards starting with any number • I can write my numerals 0-50 • I can understand different visual representations of 1's and 10's and say which number is being shown to 50 • I can match/show multiple representation of number to 50 (written, numeral, images, tens and ones) • I can find 1 more and 1 less to 50 using objects, images and abstract resources (number lines) • I can compare numbers to 50 using comparative language and symbols (objects, images, numerals) • I can order 3 groups of objects/images/ 3 numerals from greatest to smallest to 50 • I can count in 2's using objects/images/abstract resources (number lines/ number grid) • I can identify and sort odd and even numbers • I can recognise that the order of addition sentences can change but the information stays the same • I can understand and show my number bonds to 5 using objects/images/numerals • I can understand and show my number bonds to 10 using objects/images/numerals • I can compare number sentences using comparative language and symbols

	- I can add together using a part part whole model using object/images and record my findings in a number sentence - I can add using the counting on method (object, pictures, numerals) and record my findings in a number sentence - I can find a missing part in our part part whole model (objects, pictorial, numerals) - I can recognise and understand the subtract symbol - I can take away using first then and now stories and record my findings in a stem sentence and a number sentence - I can solve and record subtraction questions to 10 using objects and pictures (taking away) - I can solve and record subtraction questions to 10 using partitioning (objects, images) - I can make addition and subtraction fact family number sentences- inverse operations to 10 (e.g. 3 + 5 = 8 8-5=3 5+3=8 ect) - I can count back to solve subtraction sums - I can find the difference between 2 amounts (objects, pictorial, numerals) - I can say or sign that third is when something is split into 3 equal/same parts and that 3 thirds make a whole - I can explain how I know I have made a third pictorially regardless the orientation - I can show thirds using objects and pictures
Stage 7	- I can count in 5's and 10's using objects/images/abstract resources (number lines/number grids) - I can build numbers beyond 50 to 100 (I have 3 tens and 3 ones) and name the number with adult support - I can build a given number to 100 using objects and say how many tens and ones my number contains - I can count 0-100 forwards and backwards starting with any number - I can write my numerals 0-100 - I can understand different visual representations of 1's and 10's and say which number is being shown to 100 - I can match/show multiple representation of number to 100 (numeral, images, tens and ones) - I can show/ recognise numbers to 100 using a place value chart - I can find 1 more and 1 less to 100 using objects, images and abstract resources (number lines) - I can partition a given number to 100 into tens and ones (objects, images, numerals) - I can make comparisons of addition and subtraction sentences using comparative language and symbols - I can add by counting on and record my findings - I can understand and show my number bonds to 20 using objects/images/numerals - I can add by using my number bonds (e.g. add by making 10 and then add the remainder) - I can solve subtraction questions to 20 (object, picture, numerals) - I can make addition and subtraction fact family number sentences- inverse operations to 20 (e.g. 3 + 15 = 18 18-15=3 15+3=18 ect) - I can make and add together equal groups using object, pictures and abstract resources - I can make arrays using objects and pictures and record my findings in a number sentence

	• I can double using object/pictures/ abstract resources (number lines) • I can show multiple ways of making equal groups from a total (objects/ pictorially) • I can recognise and find 2/3's • I can name the different parts of a fraction: denominator numerator
Stage 8	• I can read/write (in my own phonetic form) number words to 100 • I can match numerals, written number, and visual representations of number to 100 • I can partition numbers to 100 in different ways (not just tens and ones) with objects and pictorial • I can represent my partitions to 100 on a part part whole model within a number sentence e.g. 63 = 31 + 32 • I can count in 10's using a number line from different start points • I can compare number sentences to 20 using comparative language and symbols • I can recognise and make bonds to 100 using my knowledge of tens and ones • I can add and subtract amounts of 10's to numbers up to 100 • I can add/subtract a 1 digit number to a 2 digit number (number line) • I can use the column addition method to add a 1 digit number to a 2 digit number • I can share equally and record my findings • I can count in ½ s to a given number • I can count in ¼ s to a given number • I can count in thirds to a given number
Stage 9	• I can estimate numbers on a number line to 100 • I can compare amounts to 100 (objects, images and numerals) using comparative language and symbols • I can order 3 groups of objects/images/ 3 numerals from greatest to smallest to 100 • I can extend my counting in 2's, 5's and 10's to 100 • I can use the column subtraction method to take away a 1 digit number from a 2 digit number • I can recognise and use fractions as numbers: Unit and non-unit fractions • I can recognise that tenths arise from dividing an object into 10 equal parts. • I can recognise and use fractions as numbers
Stage 10	• I can count in 3's using objects/images/abstract resources (number lines/ number grid) • I can count In multiples of 100 using objects, images and numerals • I can represent numbers to 1000 using objects, pictures and numerals • I can use zero as a place holder in a two digit number when using tens and units (ones).

	- I can add 2 digit numbers using the column method (with and without exchange) - I can subtract 2 digit numbers using the column method (with and without exchange) - I can form number bonds to 100 using tens and ones - I can add 3 one-digit numbers - I can add equal groups to find a total (2's, 5's 10's 3's) - I can recognise and understand the multiplication symbol - I can use pictorial information to from a multiplication question (e.g. picture of 3 plates with 3 cupcakes- 3 lots of 3 3x3=9) - I can use arrays to form and solve multiplication questions (2's, 5's 10's 3's) - I can recognise, find and write a fraction of an amount
Stage 11	- I can partition numbers to 1000 Objects, images (place value charts) and using numerals (stem and number sentences) - I can show flexible partitioning to 1000 using object and pictures (finding multiple ways to partition the same numeral) - I can represent numbers to 1000 using place value counters - I can find 1, 10 or 100 more or less than a number to 1000 using objects and images - I can identify the increments on a number line to 1000 and work out the value of a given point - I can use a number line to fine 1, 10 ad 100 more or less than a given number - I can estimate using a number line to 1000 - I can compare amounts of objects, images and numerals to 1000 using comparative language and symbols - I can order sets of numbers to 1000 - I can use my knowledge of number bonds within 10 to add and subtract multiples of 100 up to 1000 - I can add and subtract a 1 digit number from a 3 digit number - I can add and subtract a multiple of 10 to/from a 3 digit number - I can add/ subtract a 2 digit number from a 3 digit number - I can solve addition/ subtraction calculations with a missing number e.g. 4+ ? = 200 with 1, 2 and 3 digit numbers. - I can solve addition and subtraction calculations with a missing number when operations are mixed. - I can show that I know my 2 times tables - I can show that I know my 5 times tables - I can show that I know my 10 times tables - I can show that I know my 3 times tables - I can recognise and understand the division symbol - I can use pictorial information to from a division question (e.g. we have 15 cakes we want to share them into 3 boxes 3 groups of 5 15 ÷ 3= 5) - I can solve simple division questions using objects, pictures and abstract resources (÷ by 2's 3's 5's and 10's)

	• I can divide by 2, 3, 5 and 10 using my understanding of multiplication • I can explore equivalent fractions in pairs and can start to spot patterns • I can compare unit fractions or fractions with the same denominator
Stage 12	• I can count in 50's • I can count in thousands up to 10000 using objects, images and numerals • I can represent numbers to 10000 using objects, pictures and numerals • I can show flexible partitioning to 10000 using object and pictures (finding multiple ways to partition the same numeral) • I can I can partition numbers to 10000 Objects, images (place value charts) and using numerals (stem and number sentences) • find 1, 10, 100 and 1000 more and less than objects and images • I can identify the increments on a number line to 10000 and work out the value of a given point • I can use a number line to fine 1, 10, 100 and 1000 more or less than a given number to 10000 • I can estimate numbers on a number line to 10000 • I can order and compare amounts to 10000 (objects, images and numerals) using comparative language and symbols • I can round to the nearest 10 and 100 • I can add/ subtract 2 3-digit numbers • I can estimate answers to addition/subtraction sums • I can check strategies/answers trough using an inverse operation • I can show that I know my 4 times tables • I can show that I know my 8 times tables • I can divide by 4 and 8 using my understanding of multiplication • I can compare multiplication and division statements • I can solve problems involving my knows multiplication and division facts • I can multiply 2 digit numbers by 1 digit numbers with objects and pictures to support (no exchange) • I can use the column multiplication method to multiply a 2 digit number by a 1 digit number (no exchange) • I can add/ subtract two or more fractions with the same denominator where the total is less than 1 • I can add two or more fractions with different denominator where the total is less than 1
Stage 13	• I can round to the nearest 10, 100 and 1000 • I can show that I know my 6 times tables • I can show that I know my 7 times tables • I can show that I know my 9 times tables • I can show that I know my 11 times tables • I can show that I know my 12 times tables • I can divide by 6, 7, 9, 11, 12 using my understanding of multiplication

	• I can use the column multiplication method to solve a 2 digit by 1 digit sum (with exchange) • I can divide 2 digit numbers by 1 digit numbers (without exchange) • I can divide 2 digit numbers by 1 digit numbers (with exchange) • I can divide 2 digit numbers by 1 digit numbers (with exchange and remainders) • I can recognise equivalent fractions in diagrams, number lines and bar models. • I can understand and count in fractions represented on a number line • I can partition a whole to find a missing fraction e.g. 3/7 + …/7 = 1
Stage 14	• I can multiply/divide a 4 or 5 digit numbers by a single digit. • I can do simple calculations using negative numbers. • I can complete balancing equations with all four operations. • I can understand tenths as a decimal • I can divide a 1 digit number by 10 (decimals) • I can divide a 2 digit number by 10 (decimals) • I can understand 100ths as a decimal • I can divide a 1 or 2 digit number by 100 (decimals) • I can make a whole with tenths and hundredths (decimals and factions) • I can partition decimals (using place value) • I can flexibly partition decimals • I can compare and order decimals with mixtures of 1.d.p, 2.d.p. and 3.d.p. • I can round to the nearest whole number when given a decimal • I can understand halves and quarters as decimals • I can read and plot coordinates in the two upper quadrants. • I can use brackets in simple calculations. • I can find equivalent fractions. • I can reduce a fraction to its simplest form. • I can convert fractions, decimals, percentages and place them in order. • I can order fractions with different denominators. • I can understand simple ratio and can solve problems involving direct proportion by scaling up/down. • I have a sound understanding of the number system including fractions, decimals and percentages. • I can reduce a ratio to simplest form and use it in problem solving by multiplying. • I can expand brackets.