Subject Curriculum Overview

Progression in MATHS

Year group	Autumn		Spring		Summer	
	Objectives covered		**Objectives covered**		**Objectives covered**	
Nursery	**To know**	**To know how**	**To know**	**To know how**	**To know**	**To know how**
	Number I know the value of numbers 1-5. I know different representations of numbers to 3. I am beginning to understand different compositions of numbers to 5. **Numerical Patterns** I know how to find 1 less and 1 more than a number. I know how to add using practical resources. I know how to subtract using practical resources. I know how to count using 1:1 correspondence. I know how to use numicon, five frames or the part whole model to represent numbers in different ways. I know vocabulary related to addition and subtraction. I know how to order numbers to 5. **Shape, Space and Measure** I know the names of simple 2D shapes. I know the names of some	**Number** I know how to recognise numbers to 5. I know how to develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). I know how to show 'finger numbers' up to 5. To know how to begin to attempt to form numbers 1 to 5. I know how to recognise numbers to 5. **Numerical Patterns** I know how to join in with a variety of Counting rhymes and songs. I know how to begin to count using 1:1 counting correspondence up to 5. I know how to count actions, objects and sounds. I know how to count verbally to 5. I know how to say one number for each item in order: 1,2,3,4,5. I know how to order	**Number** I know the value of numbers 1-5/10. I know different representations of numbers to 3/5. I am beginning to understand different compositions of numbers to 5/10. **Numerical Patterns** I know how to find 1 less and 1 more than a number. I know how to add using practical resources. I know how to subtract using practical resources. I know how to count using 1:1 correspondence. I know how to use numicon, five frames or the part whole model to represent numbers in different ways. I know vocabulary related to addition and subtraction. I know how to order numbers to 5/10. **Shape, Space and**	**Number** I know how to recognise numbers to 5/10. I know how to develop fast recognition of up to 3/5 objects, without having to count them individually ('subitising'). I know how to show 'finger numbers' up to 5/10. To know how to begin to attempt to form numbers 1 to 5. I know how to recognise numbers to 5/10. **Numerical Patterns** I know how to join in with a variety of Counting rhymes and songs. I know how to begin to count using 1:1 counting correspondence up to 5/10. I know how to count actions, objects and sounds. I know how to count verbally to 5/10. I know how to say one number for each item in order: 1 – 5/10	**Number** I know the value of numbers 1-10. I know different representations of numbers to 5. I am beginning to understand different compositions of numbers to 10. **Numerical Patterns** I know how to find 1 less and 1 more than a number. I know how to add using practical resources. I know how to subtract using practical resources. I know how to count using 1:1 correspondence. I know how to use numicon, five frames or the part whole model to represent numbers in different ways. I know vocabulary related to addition and subtraction. I know how to order numbers to 5. **Shape, Space and Measure** I know the names of simple 2D shapes.	**Number** I know how to recognise numbers to 10. I know how to develop fast recognition of up to 5 objects, without having to count them individually ('subitising'). I know how to show 'finger numbers' up to 10. To know how to begin to attempt to form numbers 1 to 5. I know how to recognise numbers to 10. **Numerical Patterns** I know how to join in with a variety of Counting rhymes and songs. I know how to begin to count using 1:1 counting correspondence up to 10. I know how to count actions, objects and sounds. I know how to count verbally to 10. I know how to say one number for each item in order to 10. I know how to order

	3D shapes. I know specific vocabulary related to capacity, weight and length. I know some coins and their value. I know the days of the week. I know simple language to describe the position of something. I know that money is used to buy items with	numbers to 5. I know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). I know how to link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. To know their age I know how to respond to vocabulary of addition and subtraction in rhymes and games. I know how to find 1 more to 5 I know how to find 1 less to 5 I know how to add under 5 using practical resources. I know how to subtract under 5 using practical resources. I know how to begin to use vocabulary involved in adding and subtracting. **Shape, Space and Measure** I know how to talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles, cuboids. I know how to begin to use informal and	**Measure** I know the names of simple 2D shapes. I know the names of some 3D shapes. I know specific vocabulary related to capacity, weight and length. I know some coins and their value. I know the days of the week. I know simple language to describe the position of something. I know that money is used to buy items with	I know how to order numbers to 5/10. I know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). I know how to link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5/10. To know their age I know how to respond to vocabulary of addition and subtraction in rhymes and games. I know how to find 1 more to 5/10 I know how to find 1 less to 5/10 I know how to add under 5./10 using practical resources. I know how to subtract under 5/10 using practical resources. I know how to begin to use vocabulary involved in adding and subtracting. **Shape, Space and Measure** I know how to talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles, cuboids. I know how to begin to use informal and	I know the names of some 3D shapes. I know specific vocabulary related to capacity, weight and length. I know some coins and their value. I know the days of the week. I know simple language to describe the position of something. I know that money is used to buy items with	numbers to 10. I know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). I know how to link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 10. To know their age I know how to respond to vocabulary of addition and subtraction in rhymes and games. I know how to find 1 more to 10 I know how to find 1 less to 10 I know how to add under 10 using practical resources. I know how to subtract under 10 using practical resources. I know how to begin to use vocabulary involved in adding and subtracting. **Shape, Space and Measure** I know how to talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles, cuboids. I know how to begin to use informal and mathematical language:

	To know	To know how	To know	To know how	To know	To know how
		mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. To know how to recognise simple 2D shapes – circle, square, triangle, rectangle. I know how to understand position through words alone I know how to make comparisons between objects relating to size, length, weight and capacity I know how to begin to understand and use words related to size. I know how to begin to identify different coins by colour, shape, size and weight I know how to begin to say the days of the week, seasons. I know how to talk about and identify the patterns around them. I know how to notice and correct an error in a repeating pattern. I know how to begin to describe a sequence of events, using words such as 'first', 'then. I know how to recognising and creating simple patterns		mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. I know how to recognise simple 2D shapes – circle, square, triangle, rectangle. I know how to understand position through words alone I know how to make comparisons between objects relating to size, length, weight and capacity I know how to begin to understand and use words related to size. I know how to begin to identify different coins by colour, shape, size and weight I know how to begin to say the days of the week, seasons. I know how to talk about and identify the patterns around them. I know how to notice and correct an error in a repeating pattern. I know how to begin to describe a sequence of events, using words such as 'first', 'then. I know how to recognising and creating simple patterns		'sides', 'corners'; 'straight', 'flat', 'round'. I know how to recognise simple 2D shapes – circle, square, triangle, rectangle. I know how to understand position through words alone I know how to make comparisons between objects relating to size, length, weight and capacity I know how to begin to understand and use words related to size. I know how to begin to identify different coins by colour, shape, size and weight I know how to begin to say the days of the week, seasons. I know how to talk about and identify the patterns around them. I know how to notice and correct an error in a repeating pattern. I know how to begin to describe a sequence of events, using words such as 'first', 'then. I know how to recognising and creating simple patterns
Reception	**To know**	**To know how**	**To know**	**To know how**	**To know**	**To know how**
	Number I know the value of each number 1-5 or 1-10.	**Number** I know how to form the numbers 1-5 or 1-10	**Number** I know the value of each number 1-10 or 1-15.	**Number** I know how to form the numbers 1-10 or 1-15	**Number** I know the value of each number 1-20 or 20+	**Number** I know how to form the numbers 1-20 correctly.

I know how to represent the numbers 1-5 or 1-10 in different ways. I know how to make different compositions for numbers 1-5 or 1-10. I know number bonds to 5. **Numerical Patterns** I know how to find 1 less and 1 more than a number. I know how to add using practical resources. I know how to subtract using practical resources. I know how to form my numbers correctly. I know how to count using 1:1 correspondence. I know how to use numicon, tens and five frames or the part whole model to represent numbers in different ways. I know some doubles under 5. I know how to share numbers under 10. I know how to find half a number under 10. I can recognise odd and even numbers. **Shape, Space and Measure** I know the names of simple 2D shapes. I know the names of some 3D shapes. I know specific vocabulary related to capacity, weight and length.	correctly. I know how to recognise numbers 1-10. I know how to subitise numbers 1-5 or 1-10. I know how to make finger numbers 1-5 or 1-10. **Numerical Patterns** I know how to count and join in with counting rhymes and songs. I know how to count using 1:1 correspondence. I know how to count actions, objects and sounds. I know how to count verbally to and from 20. I know how to recognise numbers to 10. I know how to begin to recognise teen numbers. I know how to form numbers under 5/10 correctly. I know how to count out up to 10 from a group of objects. I know how to order numbers to 10. I know how to find 1 more and 1 less than a number to 10. I know how to add under 10 using practical resources. I know how to subtract under 10 using practical resources.	I know how to represent the numbers 1-10 or 1-15 in different ways. I know how to make different compositions for numbers 1-10 or 1-15. I know number bonds to 5. I am beginning to know number bonds to 10. **Numerical Patterns** I know how to find 1 less and 1 more than a number. I know how to add using practical resources. I know how to subtract using practical resources. I know how to form my numbers correctly. I know how to count using 1:1 correspondence. I know how to use numicon, tens and five frames or the part whole model to represent numbers in different ways. I know some doubles under 8. I know how to share numbers under 16. I know how to find half a number under 20. I can recognise dd and even numbers. **Shape, Space and Measure** I know the names and properties of 2D shapes – rhombus, square, triangle, circle, rectangle, oval,	correctly. I know how to recognise numbers 1-15. I know how to subitise numbers 1-10. I know how to make finger numbers 1-10. **Numerical Patterns** I know how to count and join in with counting rhymes and songs. I know how to count using 1:1 correspondence. I know how to count actions, objects and sounds. I know how to count verbally to and from 30. I know how to recognise numbers to 15. I know how to recognise some teen numbers. I know how to from numbers under 10/15 correctly. I know how to count out up to 15 objects from a group. I know how to order numbers to 20. I know how to find 1 more and 1 less than a number to 15. I know how to add under 15 using practical resources. I know how to subtract under 15 using practical resources. I know how to begin to count on to add.	I know how to represent the numbers 1-20 in different ways. I know how to make different compositions for numbers 1-20. I know number bonds to 5. I know number bonds to 10. I am beginning to know some number bonds to 20. **Numerical Patterns** I know how to find 1 less and 1 more than a number. I know how to add using practical resources. I know how to subtract using practical resources. I know how to form my numbers correctly. I know how to count using 1:1 correspondence. I know how to use numicon, tens and five frames or the part whole model to represent numbers in different ways. I know some doubles under 10. I know how to share numbers under 20. I know how to find half a number under 20. I can recognise dd and even numbers. **Shape, Space and Measure** I know the names and properties of 2D shapes – rhombus, square, triangle, circle, rectangle, oval,	I know how to recognise numbers 1-20. I know how to subitise numbers 1-20. I know how to make finger numbers 1-10. **Numerical Patterns** I know how to count and join in with counting rhymes and songs. I know how to count using 1:1 correspondence. I know how to count actions, objects and sounds. I know how to count verbally to and from 40 or beyond. I know how to recognise numbers to 20. I know how to from numbers under 20 correctly. I know how to count out up to 20 objects from a group. I know how to order numbers to 20. I know how to find 1 more and 1 less than a number. I know how to add under 20 using practical resources. I know how to subtract under 20 using practical resources. I know how to count on to add. I know how to count back

	I know some coins and their value. I know how to sequence the day. I know how to tell the time to o'clock. I know specific language to describe the position of something.	**Shape, Space and Measure** I know how to describe some 2D shapes using their properties. I know how to describe some 3D shapes using their properties. I know how to estimate and order items by capacity, weight and length. I know how to add simple amounts of 1p coins. I know how to use positional language to describe where something is. I know how to make a simple pattern.	hexagon and pentagon. I know the names and properties of 3D shapes – cone, cube, cuboid, triangular pyramid, sphere and cylinder. I know the value of different coins. I know how to add coins together. I am beginning to understand how to give change under 5p. I can use specific vocabulary to describe position. I know specific language to describe capacity, weight, length and height. I know how to tell the time to o'clock. I know the different seasons. I know the days of the week.	I know how to begin to count back to subtract. **Shape, Space and Measure** I know how to recognise 2D shapes – rhombus, square, triangle, circle, rectangle, oval, hexagon and pentagon. I know how to recognise 3D shapes – cone, cube, cuboid, triangular pyramid, sphere and cylinder. I know how to describe, and sort 2-D & 3-D shapes and discuss their properties. I know how to estimate, order compare, discuss and explore capacity, weight and lengths I know how to use positional language – on top, next to, beside, behind, in between, underneath, left, right, in front**.** I know how to recognise different coins. I know how to add simple amounts of 1p's and 2p's. I can begin to give change from 5p. I know how to tell the time to o'clock. I know how to begin to say the time to half past. I know how to say the days of the week.	hexagon and pentagon. I know the names and properties of 3D shapes – cone, cube, cuboid, triangular pyramid, sphere and cylinder. I know the value of different coins. I know how to add coins together. I am beginning to understand how to give change under 5p. I can use specific vocabulary to describe position. I know specific language to describe capacity, weight, length and height. I know how to tell the time to o'clock. I know the different seasons. I know the days of the week.	to subtract. I know how to solve word problems relating to addition and subtraction. I know how to solve missing number problems. **Shape, Space and Measure** I know how to recognise 2D shapes – rhombus, square, triangle, circle, rectangle, oval, hexagon and pentagon. I know how to recognise 3D shapes – cone, cube, cuboid, triangular pyramid, sphere and cylinder. I know how to describe, and sort 2-D & 3-D shapes and discuss their properties. I know how to estimate, order compare, discuss and explore capacity, weight and lengths I know how to use positional language – on top, next to, beside, behind, in between, underneath, left, right, in front**.** I know how to recognise different coins. I know how to add simple amounts of 1p's and 2p's. I know how to begin to give change from 5p. I know how to tell the

		I know how to name the seasons. I know how to recognise and create simple and more complex patterns.		time to o'clock. I know how to begin to say the time to half past. I know how to say the days of the week. I know how to name the seasons. I know how to recognise and create simple and more complex patterns. I know how to solve word problems relating to time.
One	**To know how**	**To know how**	**To know how**

Number

Number Counting to and across 50 Read/write to 10 in numerals and words Mental skills Count in multiples of 2 and 10 Number bonds to 10 Halving and doubling to 10 Place value to TU Ordering numbers to 20 Addition - 1 and 2 digits numbers to 20 Subtraction - 1 and 2 digits numbers to 20 One step problems 2 and 10 arrays – times tables Multiplication using practical manipulatives Division using practical manipulatives Fractions – ½ **Measure** Money works – coins and their value Measuring – length, weight, capacity Time – days of the week / months of the year Time – o'clock and half past **Geometry** Common 2D shapes Position of objects Data – lists and tables simple – pictograms.	**Number** Counting to and across 100 Read/write to 20 in numerals and words Mental skills Count in multiples of 2 and 10 Number bonds to 20 One more one less to 50 Halving a doubling beyond 10 Place value to TU Ordering numbers to 50 Estimating Addition with bridging - 1 and 2 digits numbers to 20 Subtraction with bridging - 1 and 2 digits numbers to 20 One step word problems Multiplication using practical manipulatives and arrays Division using practical manipulatives and arrays Fractions ½ and ¼ **Measure** Money work – coins, change, mentally and solving puzzles. Measuring – length, weight capacity Time – order days of week, months, know seasons Time – o'clock and half past **Geometry** Common 2D and 3D shapes Position and direction whole, half, quarter turns Data - simple charts and block graphs	**Number** Counting to and across 100 Read/write to 20 in numerals and words Counting problems/explaining Mental skills Count in multiples of 2, 5 and 10 Number bonds to 20 One more one less to 100 Halving and doubling beyond 10 Rounding to nearest 10. Place value to TU Ordering numbers to 50 Estimating Addition with bridging - 1 and 2 digits numbers to 20 Subtraction with bridging - 1 and 2 digits numbers to 20 Missing number problems One step word problems – now including doubling and halving Recall 2 and 10 tables securely Multiplication using practical manipulatives and arrays Division using practical manipulatives and arrays Multiplication and division word problems Fractions ¼, 2/4 ¾ **Measure** Money work – coins, change, problems, grouping, adding. Measuring – length, weigh and capacity – begin to measure using a ruler in cm

		4 operations sessions Basic skills tests stage 1	Time – days of the week, months of the year, seasons, min in an hour, hour in a day. Time 0 o'clock and half past and drawing on hands **Geometry** Folding shapes – symmetry Position and direction – moving ¼ turns Data - Record information in table, chart, block graph and pictograms Data – interpret data Data - Use ICT to represent information 4 operations sessions Basic skills tests stage 1
Two	**To know how**	**To know how**	**To know how**
	Number Use mental strategies Counting in both directions 10 more and 10 less 2 5 and 10 times tables Number bonds to 50 and 100 Doubling and corresponding halves and derive near doubles. Odd and even to 100 Place value to TU and recognise HTU Compare numbers in both directions to 100 Use < > and = signs Estimating numbers Addition - using commutative law TU + U Subtraction TU- U Missing number problems add/subtract Word problems one step Multiplication UXU Division TU/U Use all symbols for multiplication and division and other related vocab Missing number problems mult/div ½ and ¼ of objects, shapes and values Equivalent fractions – simple Write 1/3 ¼ ½ ¾ fractions **Measure** Money – all coin recognition, £ p, different combinations, totals and change, problems	**Number** Use mental strategies Counting in both directions Numbers in numerals and words to 100 and beyond 10 more and 10 less 2 5 and 10 tables and multiples of 5 and 10 Doubling and halving and near doubles Recognise any odd or even Place value to TU and partition – recognise HTU Compare numbers in both directions to 100 Use < > and = Identify and estimate in different forms Rounding TU to nearest 10 Addition TU + TU Subtraction TU-TU Use related facts to work out answers Adjusting by 1 (adding 10) Word problems with 2 steps inc numbers, quantities and measures Inverse relationship Estimating answers Multiplication UX U and TU X U Division TU / U Use all symbols for multiplication and division and other related vocab. Missing number problems ½ and ¼ of objects, shapes and values Equivalent fractions – simple	**Number** Use mental strategies Counting in both directions Numbers in numerals and words to 100 and beyond Recognise multiples of five 2 5 and 10 tables and recognise multiples of 3 Doubling and halving and near doubles Recognise odd and even numbers Begin to read 3 digit numbers Compare numbers in both directions to 100 Use < > and = Identify and estimate in different forms Rounding TU to nearest 10 Addition TU + TU Subtraction TU - TU Use related facts to work out answers Adjusting by 1 (adding 20) Bridging through multiples of 10 Word problems 2 steps, inc numbers, quantities and measures Inverse relationships Estimating answers Multiplication UX U and TU X U Division TU/U Use all symbols for multiplication and division and other related vocab. Multi operation word problems Missing number problems

	Measure – estimate and measure – length height, temp, capacity using equipment Compare and use symbols Measure to nearest cm Time – read to 5 mins and ¼ past etc Use units of time e.g. seconds **Geometry** Shape – identify properties 2D shapes Properties of some 3D shapes Compare and sort shapes Describe position, direction and movement Right angles – quarter – clockwise and anti-clockwise Present data - Use ICT Pictograms, tally charts, block diagrams, tables 4 operations sessions Basic skills tests stage 2	Write 1/3 ¼ ½ ¾ fractions Reading scales and division on a scale to 25 **Measure** Money – all coin recognition, £ p and different representations, totals and change, problems Measure – estimate and measure – length height, temp, capacity using equipment Compare and use symbols with measurements Measure to nearest cm Time – read to 5 mins and ¼ past etc and draw hands on the clocks. Use units of time e.g. seconds **Geometry** Follow and give instructions involving position, direction and movement. Arrange mathematical objects in patterns and sequences Properties of 2D and 3D shapes Use whole, half and quarter turns – clockwise and anti-clockwise Describe position, direction and movement Present data - Use ICT Pictograms, tally charts, block diagrams, tables 4 operations sessions Basic skills tests stage 2	½ and ¼ of objects, shapes and values Equivalent fractions – simple Write 1/3 ¼ ½ ¾ fractions Reading scales and division on a scale to 25 **Measure** Money – all coin recognition, £ p and different representations, totals and change, problems Measure – estimate and measure – length height, temp, capacity using equipment Compare and use symbols with measurements Measure to nearest cm Calculate time intervals Time – read to 5 mins and ¼ past etc and draw hands on the clocks. Use units of time e.g. seconds **Geometry** Properties of 2D and 3D shapes Identify shapes in diff orientations Identify reflective symmetry Draw lines of symmetry Describe position, direction and movement Arrange mathematical objects in patterns and sequences Use whole, half and quarter turns – clockwise and anti-clockwise Comparing data Present data - Use ICT Pictograms, tally charts, block diagrams, tables 4 operations sessions Basic skills tests stage 2
Three	**To know how**	**To know how**	**To know how**
	Number Use mental strategies Counting both directions and multiples and tenths Counting multiples 2, 3, 5 and 10 Write numbers as numerals and words to 1000 10 and 100 more or less Adding / sub mental using near doubles Tables 3 4 and 8 Place value HTU	**Number** Use mental strategies Counting both directions and multiples and tenths Counting in multiples 4 8 50 and 100 Write numbers as numerals and words to 1000 Add/sub combinations TU mentally Recall pairs / multiples of 100 to 1000 Compare and order to at least 1000 Position on a number line	**Number** Use mental strategies Counting both directions and multiples and tenths Counting in multiples 4 8 50 and 100 Write numbers as numerals and words to 1000 Odd and even beyond 100 Recognise multiples of 2, 3, 4, 5, 8, 10 up to 100 Tables 2, 3, 4, 5, 8 and 10 3 digit multiples of 50 and 100

Compare and order to 1000	Recognise multiplies of 2, 3, 4, 5, 8, 10 up to 100	Derive doubles and halves of multiplies of 5 to 100 and 50 to 500
Rounding to 10	Tables 2, 3, 4, 5, 8 and 10	Multiplying U and TU by 10 and 100
Addition methods and mental with 2 and 3 digits	Place value HTU	Place value HTU
Subtraction methods and mental with 2 and 3 digits	Rounding to 10 and 100 (TU and HTU)	Partition numbers in different ways
Solve problems – using facts of addition and subtraction	Multiplying U and TU by 10 and 100 – place value	Identify and represent numbers differently
Calculate missing numbers – add/sub	Work out patterns in number sequences	Rounding to 10 and 100 (TU and HTU)
Word problems 1 and 2 step – add/sub	Addition methods and mental up to 3 digits	Solve problems involving place value
Estimating answers	Subtraction methods and mental up to 3 digits	Addition methods and mental up to 3 digits
Inverse checking	Solve problems – use facts of addition and subtraction	Subtraction methods and mental up to 3 digits
Represent calculations as images and diagrams	Calculate missing numbers – add/sub	Use near multiples to add/ sub
Multiplication TU by U	Word problems 1 and 2 step - add/sub	Finding differences
Division TU by U	Estimating answers	Solve problems – use facts of addition and subtraction
Understand inverse of multiplication and division	Inverse checking	Calculate missing numbers – add/sub
Use commutative law	Represent calculations as images and diagrams	Word problems 1 and 2 step – add/sub
Explain method choices.	Multiplication TU by U	Estimating answers
Calculate missing numbers for division and multiplication	Division TU by U	Inverse checking
Use multiple visual representations and diagrams	Understand inverse of multiplication and division	Multiplication TU by U
Recognise tenths / 10 equal parts	Calculate missing numbers for division and multiplication	Division TU by U
Read and write fractions 3/6 8/10 etc	Explain method choices	Understand inverse of multiplication and division
Know what the numerator and denominator are	Use commutative law	Calculate missing numbers for division and multiplication
Fractions of shapes	Read and write fractions 3/6 8/10 etc	Explain method choices
Estimate fractions of shapes	Know the numerator and denominator	Read and write proper fractions
Recognise unit and non-unit fractions of objects / shapes	Fractions of shapes	Fractions of shapes
Fractions of quantities	Estimate fractions of shapes	Estimate fractions of shapes
Show fractions through diagrams	Recognise unit and non-unit fractions of objects / shapes	Unit fractions of shapes / quantities
Add/subtract fractions same denominator	Fractions of quantities	Non-unit fractions of shapes / quantities
Compare and order unit fractions and with same denominator.	Show fractions through diagrams	Add/subtract fractions same denominator
Solve problems with fractions	Add/subtract fractions same denominator	Compare and order unit fractions and with same denominator.
Measure	Compare and order unit fractions and with same denominator.	Solve problems with fractions
Add and subtract money	Solve problems with fractions	**Measure**
One and two step problems with money	**Measure**	Add and subtract money
Measure compare add subtract length /mass /volume	Add and subtract money	1 and 2 step problems involving money
Estimate record measurements – mm cm m km	1 and 2 step problems involving money	Know relationships between measures e.g. L to ml
Measure perimeter 2d shapes	Measure compare add subtract length /mass /volume	Use decimal notation in measurements
Time – reading and drawing hands to nearest minute	Read scales to nearest division / half division	Measure compare add subtract length /mass /volume
Time using roman numerals	Estimate and record measurements – mm cm m km	Read scales to nearest division / half division
Compare time	Measure perimeter around a shape/calculate	Estimate and record measurements – mm cm km
Estimate time	Use scales partially numbers	Measure perimeter around a shape/calculate
	Estimate and read time – accuracy	Use scales partially numbered

	Calculate time differences	Tell and write the time in figures and roman numerals	Estimate and read time – accuracy
	Geometry	Compare durations	Tell and write the time in figures and roman numerals
	Draw 2d shapes	**Geometry**	Fluent in using 12 hour clock
	Make 3d shapes	Draw 2d shapes	Compare durations
	Recognise shapes in different orientations	Make 3d shapes	**Geometry**
	Use 4 compass points for direction	Recognise properties and use accurate language	Draw 2d shapes
	Solve shape/ pattern problems	Draw and complete shapes – symmetry	Make 3d shapes
	Identify angles – acute, obtuse, reflex	Use 4 compass points for direction	Recognise properties and use accurate language
	Recognise horizontal/vertical/ parallel and perpendicular lines	Connect decimals and rounding to drawing points on a line in cm	Draw and complete shapes – symmetry
	Solve problems with data	Solve shape / pattern problems	Use 4 compass points for direction
	Draw data in all forms – pictograms, bar charts, venn and carroll	Identify right angles and turns / half turns	Connect decimals and rounding to drawing points on a line in cm
	Interpret data	Greater or less than 90 degrees	Solve shape / pattern problems
	Use simple scales in data	Draw shapes with right angles	Angles in different contexts – acute, right and obtuse angles
	Use venn and carroll diagrams	Recognise horizontal/vertical/ parallel and perpendicular lines	Identify right angles and turns / half turns
		Solve problems with data	Greater or less than 90 degrees
		Draw data in all forms -– pictograms, bar charts, venn and carroll	Draw shapes with right angles
	4 operations sessions	Interpret data	Recognise horizontal/vertical/ parallel and perpendicular lines
	Basic skills tests stage 3	Use simple scales in data	Investigate and reason with shapes
		Use venn and carroll diagrams	Collect, organise and interpret data
			Solve one and two step questions with data
			Use venn and carroll diagrams
		4 operations sessions	
		Basic skills tests stage 3	4 operations sessions
			Basic skills tests stage 3
Four	**To know how**	**To know how**	**To know how**
	Number	**Number**	**Number**
	Use mental strategies	Use mental strategies	Mental strategies
	Counting in both directions multiples and hundredths	Counting in both directions multiples and hundredths and unit fractions	Counting in both directions multiples and hundredths and unit fractions
	Count in multiples of 6, 7, 9, 25 and 1000	Count in multiples of 6, 7, 9, 25 and 1000	Count in multiples of 6, 7, 9, 25 and 1000
	Write numbers as numerals and words to 10000	Write numbers as numerals and words to 10000	Write numbers as numerals and words to 10000
	10, 100 and 1000 more or less	0.1, 1, 10, 100 and 1000 more or less	0.1, 1, 10, 100 and 1000 more or less
	Adding / sub mental using near doubles	Count through 0 and negative numbers	Count through 0 and negative numbers
	Recap Tables 3 4 and 8	Tables to 12 x 12	Tables to 12 x 12
	Count through 0 and negative numbers	Multiply and divide by 0, 1, 10 and 100 – whole numbers	Multiply and divide by 0, 1, 10 and 100 – whole numbers
	Tables to 12 x 12 – revision of 2, 3, 4, 5, 6 and 10 start with 9	Identify doubles of 2 digit numbers	Identify doubles of 2 digit numbers
	Multiply and divide by 10 and 100 – whole numbers	Add near doubles	Add near doubles
	Identify doubles of 2 digit numbers	Multiply 3 unit numbers numbers	Multiply 3 numbers

Odd and even to 1000 and properties	Recognise and use factor pairs	Recognise and use factor pairs
Place value ThHTU	Place value ThHTU	Odd and even to 1000 and properties
Compare and order numbers to and past 1000	Compare and order numbers to and past 1000	Place value ThHTU
Compare and order numbers to 2 decimal places	Compare and order numbers to 2 decimal places	Compare and order numbers to and past 1000
Estimate – representations	Recognise and continue number sequences	Compare and order numbers to 2 decimal places
Round to 10, 100 or 1000	Roman numerals to 100	Estimate – representations
Round 1 decimal place to whole	Estimate proportion – fraction	Round to 10, 100 or 1000
Positive and negative numbers	Estimate – representations	Round 1 decimal place to whole
Addition methods and mental up to 4 digits	Round to 10, 100 or 1000	Positive and negative numbers
Subtraction methods and mental up to 4 digits	Round 1 decimal place to whole	Recognise and continue number sequences
Solve problems – using facts of add/sub	Positive and negative numbers	Roman numerals to 100
Calculate missing numbers – add/sub	Addition methods and mental up to 4 digits	Estimate proportion – fraction
Word problems 1 and 2 step including money and decimals – add/sub	Subtraction methods and mental up to 4 digits	Estimate – representations
Estimating answers – use rounding	Solve problems – using facts of add/sub	Addition methods and mental up to 4 digits
Inverse checking	Calculate missing numbers – add/sub	Subtraction methods and mental up to 4 digits
Represent calculations as images and diagrams	Word problems 1 and 2 step including money and decimals	Solve problems – using facts
Multiplication TU by U	Estimating answers – use rounding	Calculate missing numbers – add/sub
Division TU by U	Inverse checking	Word problems 1 and 2 step including money and decimals
Mental multiplication using facts	Represent calculations as images and diagrams and with reasons	Estimating answers – use rounding
Use factor pairs	Multiplication TU and HTU by U	Inverse checking
Commutative law	Division TU and HTU by U	Represent calculations as images and diagrams and with reasons
Distributive law	Mental multiplication using facts	Multiplication TU and HTU by U
Associative law	Commutative law	Division TU and HTU by U
Problem solving and reasoning	Distributive law	Mental multiplication using facts
Inverse operations	Associative law	Commutative law
Calculate missing numbers – mult/div	Problem solving and reasoning	Distributive law
Two step word problems – appropriate operations.	Inverse operations	Associative law
Fraction whole numbers divided by another	Calculate missing numbers – mult/div	Problem solving and reasoning
Equivalent fractions – diagrams	Two step word problems – appropriate operations.	Inverse operations
Interpret mixed numbers	Equivalent fractions – diagrams	Calculate missing numbers – mult/div
Compare and order fractions – same denominator	Interpret mixed numbers	Two step word problems – appropriate operations.
Recognised hundredth /100 and tenths /10	Compare and order fractions – same denominator	Equivalent fractions – diagrams
Add and subtract fractions same denominator	Recognised hundredth /100 and tenths /10	Interpret mixed numbers
Recognise and write decimal equivalents of 10^{ths} 100^{ths}	Add and subtract fractions same denominator	Compare and order fractions – same denominator
Recognise and write decimal equivalents of ¼ ½ ¾	Recognise and write decimal equivalents of 10^{ths} 100^{ths}	Recognised hundredth /100 and tenths /10
Measure	Recognise and write decimal equivalents of ¼ ½ ¾	Add and subtract fractions same denominator
Convert between measurements – length, weight, capacity	Solve simple and harder problems – fractions	Recognise and write decimal equivalents of 10^{ths} 100^{ths}
Know ½ ¼ ¾ 1/10 of measures	Use ratio and proportion between 2 quantities	Recognise and write decimal equivalents of ¼ ½ ¾
Perimeter – formula (a+b)x2	Estimate a proportion	Solve simple and harder problems – fractions
Area – counting squares – arrays	**Measure**	Use ratio and proportion between 2 quantities

Recognise and write decimal equivalents of 10^{ths} 100^{ths} appears where noted.

	Estimate and compare measures Read time to nearest minute Calculate time intervals Read timetables Convert time analogue and digital Solve problems involving time **Geometry** Compare and classify shapes inc quadrilaterals Understand the terms regular and irregular and identify the shapes Symmetry 2d shapes in orientations Symmetry in patterns/ diagrams Identify different nets of solids Compare and order angles by size Use/identify acute, obtuse and right angles Draw axes in one quadrant – equal scales Describe coordinates in one quadrant Plot coordinates Plot coordinates to complete a polygon Describe movement – position and translation Recognise horizontal and vertical lines Use 8 points of a compass Interpret data – different charts Solve comparison, sum and difference problems Use scales in graphs and representations Problems as number sentences, statements diagrams Report solutions to puzzles Use a calculator to carry out 1 and 2 step problems Correct mistakes Explain and record methods. 4 operations sessions Basic skills tests stage 4	Convert between measurements – length, weight, capacity Know ½ ¼ ¾ 1/10 of measures Perimeter – formula (a+b)x2 Area – counting squares – arrays Estimate and compare measures Interpret intervals on scales Read time to nearest minute Calculate time intervals Read timetables Convert time – analogue and digital Solve problems involving time **Geometry** Compare and classify shapes inc quadrilaterals Understand the terms regular and irregular and identify the shapes Symmetry 2d shapes in orientations Symmetry in patterns/ diagrams Identify different nets of solids Compare and order angles by size Use acute, obtuse and right angles – and identify Investigate statements of shapes Draw axes in one quadrant – equal scales Describe coordinates in one quadrant Plot coordinates Plot coordinates to complete a polygon Describe movement – position and translation Recognise horizontal and vertical lines Interpret data – different charts including line graphs Solve comparison, sum and difference problems Use scales in graphs and representations Problems as number sentences, statements, diagrams Report solutions to puzzles Use a calculator to carry out 1 and 2 step problems Correct mistakes Explain and record methods 4 operations sessions Basic skills tests stage 4	**Measure** Convert between measurements – length, weight, capacity Know ½ ¼ ¾ 1/10 of measures Perimeter – formula (a+b)x2 Area – counting squares – arrays Estimate and compare measures Interpret intervals on scales Read time to nearest minute Calculate time intervals Read timetables Convert time – analogue and digital Solve problems involving time **Geometry** Compare and classify shapes inc quadrilaterals Understand the terms regular and irregular and identify the shapes Symmetry 2d shapes in orientations Symmetry in patterns/ diagrams Nets of solids Compare and order angles by size Draw axes in one quadrant – equal scales Describe coordinates in one quadrant Plot coordinates Plot coordinates to complete a polygon Describe movement – position and translation Interpret data – different charts including line graphs Solve comparison, sum and difference problems Problems as number sentences, statements, diagrams Report solutions to puzzles Use a calculator to carry out 1 and 2 step problems Correct mistakes Explain and record methods 4 operations sessions Basic skills tests stage 4
Five	**To know how**	**To know how**	**To know how**
	Number	**Number**	**Number**

Use mental strategies	Use mental strategies	Use mental strategies
Counting both direction inc through 0, powers of 10 up to 100,000 and decimals	Counting both direction inc through 0, powers of 10 up to 100,000 and decimals and fractions	Counting both direction inc through 0, powers of 10 up to 100,000 and decimals and fractions
Interpret negative numbers	Interpret negative numbers	Interpret negative numbers
Read, write order to at least 1,000,000	Read, write order to at least 1,000,000	Read, write order to at least 1,000,000
Multiply and divide mentally using facts and tables	Add and subtract mentally – larger numbers	Add and subtract mentally – larger numbers
Multiply divide by 10, 100, 1000 inc decimals	Multiply and divide mentally using facts and tables	Multiply and divide mentally using facts and tables
Use square and cube numbers	Doubling to multiply by 4	Doubling to multiply by 4
Double/halve to 100	Halve any 2 digit number	Halve any 2 digit number
Recognise and extend number sequences	Multiplication to 12 x 12 and division facts	Multiplication to 12 x 12 and division facts
Read, write, compare and order to 1 and 3 decimals	Multiply divide by 10, 100, 1000 inc decimals	Multiply divide by 10, 100, 1000 inc decimals
Round to nearest 10, 100, 1000 and 10000 to 1,000,000	Use near multiples to work out answers	Explain digit representations into decimals
Round decimals with 2 dp to whole and 1dp	Read, write, compare and order to 1 and 3 decimals	Partition numbers to 1 million
Solve problems with above	Round to nearest 10, 100, 1000 and 10000 to 1,000,000	Read, write and compare to 1 million
Read and write roman numerals to 1000	Round decimals with 2 dp to whole and 1dp	Round decimals to nearest whole
Addition methods and mental more than 4 digits	Solve problems with above	Read and write roman numerals to 1000
Subtraction methods and mental more than 4 digits	Read and write roman numerals to 1000	Calculate temperature rise or fall across 0
Use rounding to check answers	Revise symbols	Addition methods and mental more than 4 digits
Calculate missing numbers – add/sub	Addition methods and mental more than 4 digits	Subtraction methods and mental more than 4 digits
Inverse checking	Subtraction methods and mental more than 4 digits	Use rounding to check answers
Multi-step word problems with conversions inc decimals and money	Use rounding to check answers	Calculate missing numbers – add/sub
Identify multiples and factors	Calculate missing numbers – add/sub	Inverse checking
Prime numbers	Inverse checking	Multi-step word problems with conversions inc decimals and money
Prime factors	Multi-step word problems with conversions inc decimals and money	Represent puzzles or problems
Common factors	Begin to use brackets	Explore patterns, properties and relationships
Multiply 4 digits by 1 or 2 digits	Identify multiples and factors	Know and apply tests of divisibility 2, 4, 5, 10 or 100
Divide up to 4 digits by 1 digit	Prime numbers	Make and investigate statements about numbers
Solve problems inv multiplication and division	Prime factors	Use empty number line to calculate change
Solve problems inv all operations	Common factors	Converting money
Problems inv scaling by fractions of multiples of same number	Multiply 4 digits by 1 or 2 digits	Identify multiples and factors
Identify, name, compare and order fractions with denominators and write equivalent fractions – inc tenths and hundredth	Divide up to 4 digits by 1 digit	Prime numbers
Convert mixed numbers and improper fractions	Use square and cube numbers	Prime factors
Fractions of quantities – division	Solve problems inv multiplication and division	Common factors
Percentages % - of amounts	Solve problems inv all operations	Multiply 4 digits by 1 or 2 digits
Add / sub fractions with different denominators	Problems inv scaling by fractions	Divide up to 4 digits by 1 digit
Multiply proper fractions	Represent problems and puzzles	Use square and cube numbers
Read and write decimals as fractions	Use knowledge to estimate and check answers e.g inverse	Solve problems inv multiplication and division
Problems involving decimals to 3dp	Identify, name, compare and order fractions with denominators and write equivalent fractions – inc tenths and hundredth	Round answers up or down depending on context
		Solve problems inv all operations
		Problems inv scaling by fractions
		Represent problems and puzzles

Column 1:

Read and write % as fractions and decimals
Problems inv % and decimals and fractions

Measures

Convert between metric measures
Estimate volume and capacity
Interpret scales with two unnumbered intervals
Perimeter of composite rectilinear shapes
Measure and draw lines to nearest mm
Area – inc w x h = a
Read write and convert time between 12 and 24 hr
Problems involving converting time
Complete, read and interpret tables and time tables

Geometry

Identify 3d from 2d shapes
Identify, visualise and describe shape properties
Read and plot coordinates in one quadrant
Parallel and perpendicular lines
Complete patterns 2 lines of symmetry
Reflection
Translation
Estimate angles including reflex
Compare angles including reflex
Draw given angles including reflex
Measure angles – protractor – inc reflex
Use turns and 90 degrees to identify angles
Missing lengths and angle problems
Regular and irregular polygon from properties
Solve comparison sum and difference problems in graphs

4 operations sessions
Basic skills tests stage 5

Column 2:

Order fractions inc mixed numbers
Convert mixed numbers and improper fractions
Fractions of quantities – division
Percentages % - of amounts
Add / sub fractions with different denominators
Multiply proper fractions
Read and write decimals as fractions
Problems involving decimals to 3dp
Read and write % as fractions and decimals
Problems inv % and decimals and fractions

Measures

Convert between metric measures
Know metric and imperial measures
Perimeter of composite rectilinear shapes
Area – inc w x h = a
Estimate volume
Problems involving measure
Read write and convert time between 12 and 24 hr
Problems involving converting time
Complete, read and interpret tables and time tables

Geometry

Identify 3d from 2d shapes
Identify, visualise and describe shape properties
Measure line to nearest mm
Estimate angles including reflex
Measure angles including reflex
Draw given angles including reflex
Use turns and 90 degrees to identify angles
Regular and irregular polygon from properties
Read and plot coordinates in one quadrant
Reflection
Translation
Construct frequency tables – plot graphs
Solve comparison sum and difference problems inc graphs
Complete and read time tables
Mode of data
Plan and pursue and enquiry - present evidence
Interpret data – answer questions

4 operations sessions

Column 3:

Use knowledge to estimate and check answers e.g inverse
Explain reasoning
Explore patterns and puzzles in diagrams
Identify, name, compare and order fractions with denominators and write equivalent fractions – inc tenths and hundredth
Convert mixed numbers and improper fractions
Fractions of quantities – division
Percentages % - of amounts
Add / sub fractions with different denominators
Multiply proper fractions and mixed numbers
Use sequences to scale numbers up/down
Read write and order decimals to 3dp
% - read write and equivalents

Measures

Read, choose and use standard metric units
Measure length
Convert larger to smaller units to 1dp
Convert between metric measures
Use approx. equivalences metric and imperial
Perimeter of composite rectilinear shapes
Area – use w x h = a
Measure to nearest mm
Estimate volume
Read write and convert time between 12 and 24 hr
Problems involving converting time
Complete, read and interpret tables and time tables

Geometry

Identify 3d from 2d shapes
Estimate and compare angles including reflex
Draw given angles - including reflex
Measure angles - including reflex
Calculate missing angles
Angles in triangles and rectangles
Use turns and 90 degrees to identify angles
Regular and irregular polygon from properties
Read and plot coordinates in one quadrant
Reflection
Translation
Make and investigate statements of shapes
Complete patterns up to 2 lines of symmetry

		Basic skills tests stage 5	Construct frequency tables – plot graphs Solve comparison sum and difference problems in graphs Complete and read time tables Mode of data Interpret graphs and chrts 4 operations sessions Basic skills tests stage 5
Six	**To know how**	**To know how**	**To know how**
	Number Use mental strategies Read, write and compare number to 10,000,000 Round any whole number and up to 2 dp Multiply divide by 10, 100 and 1000 to 3dp Use negative numbers and calculate intervals across 0 Solve problems Addition recap Subtraction recap Multiply 4 digits by 2 digits Long division Division up to 4 digit by 2 digit Interpret remainders as whole numbers, fractions and decimals Identify common factors, common multiples and prime numbers Calculations involving all operations Multi-step problems 4 operations Estimation to check answers Simplify fractions Compare and order fractions Add and subtract fraction with different denominators and mixed numbers Multiply proper fractions Divide proper fractions by whole numbers Fraction, % and decimal equivalents Decimal multiplication Problems with answers rounded Problems involving relative size of 2 quantities – missing values calc using integer multi and div Problems involving % of quantities	**Number** Use mental strategies Read, write and compare number to 10,000,000 Round any whole number and up to 2dp Multiply divide by 10, 100 and 1000 to 3dp Use negative numbers and calculate intervals across 0 Solve problems Addition recap Subtraction recap Multiply 4 digits by 2 digits Long division Division up to 4 digit by 2 digit Interpret remainders as whole numbers, fractions and decimals Identify common factors, common multiples and prime numbers Calculations involving all operations Multi-step problems 4 operations Estimation to check answers Simplify fractions Compare and order fractions Add and subtract fraction with different denominator and mixed numbers Multiply proper fractions Divide proper fractions by whole numbers Fraction, % and decimal equivalents Decimal multiplication Problems with answers rounded Problems involving relative size of 2 quantities – missing values calc using integer multi and div Problems involving % of quantities	**Number** Use mental strategies Read, write and compare number to 10,000,000 Round any whole number and up to 2dp Multiply divide by 10, 100 and 1000 to 3dp Use negative numbers and calculate intervals across 0 Solve problems Addition recap Subtraction recap Multiply 4 digits by 2 digits Long division Division upto 4 digit by 2 digit Interpret remainders as whole numbers, fractions and decimals Identify common factors, common multiples and prime numbers Calculations involving all operations Multi-step problems 4 operations Estimation to check answers Simplify fractions Compare and order fractions Add and subtract fraction with different denominators and mixed numbers Multiply proper fractions Divide proper fractions by whole numbers Fraction, % and decimal equivalents Decimal multiplication Problems with answers rounded Problems involving relative size of 2 quantities – missing values calc using integer multi and div Problems involving % of quantities

Problems involving unequal grouping Problems inv conversion of units Converting measures to 3dp Recognise that shapes of the same area can have different perimeters Use formula for are and volume Area of parallelogram Area of triangles Calculate, estimate and compare volume of cubes and cuboids **Algebra** Use simple formula Generate and describe linear number sequences Express missing number problems algebraically Find pairs of numbers that satisfy equations Enumerate possibilities of combinations of 2 variables **Geometry** Draw 2d – dimensions and angles Build 3d shapes and nets Classify shapes Radius, diameter and circumference Missing angles – use knowledge of opposites and straight lines to calculate angles. Use 4 quadrants for coordinates Draw and translate simple shapes Reflect shapes in the axes Pie charts and line graphs Mean 4 operations sessions Basic skills tests stage 6	Problems involving unequal grouping Problems inv conversion of units Converting measures to 3dp Recognise that shapes of the same area can have different perimeters Use formula for are and volume Area of parallelogram Area of triangles Calculate, estimate and compare volume of cubes and cuboids **Algebra** Use simple formula Generate and describe linear number sequences Express missing number problems algebraically Find pairs of numbers that satisfy equations Enumerate possibilities of combinations of 2 variables **Geometry** Draw 2d – dimensions and angles Build 3d shapes and nets Classify shapes Radius, diameter and circumference Missing angles – use knowledge of opposites and straight lines to calculate angles. Use 4 quadrants for coordinates Draw and translate simple shapes Reflect shapes in the axes Pie charts and line graphs Mean 4 operations sessions Basic skills tests stage 6	Problems involving unequal grouping Problems inv conversion of units Converting measures to 3dp Recognise that shapes of the same area can have different perimeters Use formula for are and volume Area of parallelogram Area of triangles Calculate, estimate and compare volume of cubes and cuboids **Algebra** Use simple formula Generate and describe linear number sequences Express missing number problems algebraically Find pairs of numbers that satisfy equations Enumerate possibilities of combinations of 2 variables **Geometry** Draw 2d – dimensions and angles Build 3d shapes and nets Classify shapes Radius, diameter and circumference Missing angles – use knowledge of opposites and straight lines to calculate angles. Use 4 quadrants for coordinates Draw and translate simple shapes Reflect shapes in the axes Pie charts and line graphs Mean 4 operations sessions Basic skills tests stage 6