THE 21

STEPS

Year R		Step 1	Step 2	Step 3	End of year Expectations
Problem Solving		**- Use manipulatives (including representing numbers using fingers and mark making on paper) and objects to solve problems. - To be able to sort object by recognising similarities or a given criteria. - Uses some number names and number and ordinal language spontaneously. - Shows and interest in number problems and numerals in the environment. - In practical activities and discussion begin to use the vocabulary involved in adding and subtracting.**			
Number	**Place Value**	- I am beginning to order numbers from 0 to 10. - I can recognise which number is one more/less for numbers. - I can match numeral and quantity correctly.	- I can to order numbers from 0 to 10- I can recognise numerals 1-5. - I am beginning to recognise which number is one more/less for numbers 0 to 10	- I can order numbers from 0 to 20. - I can recognise which number is one more/less for numbers to 10 and beyond by counting - I can recognise numerals 0-10.	**- I can count forwards to 20, beginning from 0.** **- I can order numbers from 0 to 20.** **- I can recognise which number is one more/less for numbers 0 to 20.**
	Counting	- I am beginning to say number names forwards to 10 and relate this to counting objects to find how many. - I understand that not only objects but anything can be counted including steps, claps etc.	- I can count objects to 10 and beyond including objects that cannot be moved.	- I can count forwards to 20. - I can estimate how many objects I can see and check by counting them.	
	Fractions and Decimals		- I can recognise one half of a regular shape e.g. circle or square.	- I can recognise one half of an object or shape. I can share quantities between 2 people in practical contexts.	**- I can recognise one half of an object or shape.**
Calculating	**Addition and Subtraction**	- Using manipulatives, I can add and subtract two 1-digit numbers practically. - I can compare 2 groups of objects saying when they have the same number.	- Using manipulatives, I can add and subtract two 1-digit numbers practically and can record using pictures or symbols.	- Using quantities, I can to add and subtract two 1-digit numbers by counting on and back to find the answer.	**- Using quantities and objects, I can add and subtract two 1-digit numbers by counting on and back to find the answer.**
	Multiplication and Division			I use grouping and sharing in play and practical contexts (.e.g giving out grapes at snack time)	

Year R	Step 1	Step 2	Step 3	End of year Expectations
Shape	- I show an interest in shape and space by playing with shapes and recognising different arrangements. - I can match shapes. - I can talk about the properties of 2D shapes.	- I can recognise different 2D and 3D shapes and use mathematical terms to describe them.	- I can describe patterns using mathematical vocabulary - I can identify everyday shapes (circle, triangle, square, rectangle).	**- I can recognise, create and describe patterns.** **- I can explore characteristics of everyday objects and shapes and use mathematical language to describe them.**
Space	- With support, I am beginning to recognise positional language (e.g. underneath, on top, in, out)	- I am beginning to recognise positional language (e.g. next to) - I am beginning to recognise patterns and can describe the position of shapes such as behind or next to.	- I can use everyday language to talk about position (E.g. beside, between).	**- I can use everyday language to talk about position.**
Measurement	- I can compare two things to identify which is longer or shorter - I can compare two objects to identify which is heavier or lighter - I can say when something is full and empty.	- I can compare a range of items to say which is the longest or shortest - I can compare a range of items to say which is the heaviest and lightest - I can compare a range of containers and say which contains the most or least - I can recognise numerals of personal significance e.g. date, birthday, etc. - I can order and sequence familiar events.	- I can use everyday language to talk about size, weight, capacity, distance to compare quantities and objects and to solve problems - I can use everyday language to talk about time and money.	**- I can use everyday language to talk about size, weight, capacity, distance time and money to compare quantities and objects and to solve problems.**

Year 1		Step 4	Step 5	Step 6	End of year Expectations
Problem Solving		**- I can solve one-step problems that can involve addition and subtraction, using concrete objects and pictorial representations.** **- I can 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.** **- I can compare, describe and solve practical problems for:** ***- Lengths and heights (e.g. long/short, longer/ shorter, tall/ short, double/half)*** ***- Mass or weight (e.g. heavy/light, heavier than, lighter than)*** ***- Capacity/ volume (full/empty, more than, less than, half, quarter)*** ***- Time (hours, minutes and seconds, quicker, slower, earlier, later).***			
Number	**Place Value**	- I can read and write numbers to 20. - I am beginning to know one more/less for numbers to 20 without counting. - I am beginning to identify and represent number using objects and use the language more/ less.	- I can read and write numbers to 50. - I know one more/less for numbers to 50 without counting. - I can identify and represent numbers using objects (e.g. Diennes or Numicon) and use the language more/less (fewer) most and least.	-I can read and write numbers to 100. - I can count, read and write numbers to 20 in numerals and words. -I know one more/less for numbers to at least 100 without counting. - I can identify and represent numbers using objects (e.g. Diennes or Numicon) and pictorial representations including the number line, and use the language of: equal to, more then, less than (fewer – when comparing quantities), most and least.	**- I can count, read and write numbers to 100 in numerals** **- I can identify one more and one less.** **- I can identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more then, less than (fewer), most and least.**
	Counting	- I can say numbers in order to 20 forwards and backwards, beginning at any number and relate this to counting up to 20 objects. - I can count in multiples of ten.	- I can count to 50 forwards and backwards, beginning from any given number and relate this to counting up to 50 objecfs. - I can count in multiples of twos	- I can count to 100, forwards and backwards, beginning from any given number and relate this to counting up to 100 objects. - I can count in multiples of fives.	**- I can count to and across 100, forwards and backwards, beginning from 0 or 1, or from any given number.** **- I can count in multiples of twos, five and tens when given a number.**
	Fractions and Decimals	- I can recognise and name a half as one of two equal parts of an object and shapes - I can recognise, find and name a half as one of two equal parts of both discrete (countable) and continuous (measures) quantities.	- I can recognise, and name a quarter as one of four equal parts of an object and shape. - I can recognise, find and name a quarter as one of four equal parts of a quantity. both discrete (countable) and continuous (measures) quantities.	I can read and represent half as ½ I can read and represent quarter as ¼ I can recognise that a quarter is a half of a half using pictorial representations and quantities.	**- I can recognise, find and name a half as one of two equal parts of an object, shape or quantity.** **- I can recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.**

Year 1		Step 4	Step 5	Step 6	End of year Expectations
Calculating	**Addition and Subtraction**	- I can recall addition facts within 10. - I can add two 1-digit numbers using manipulatives or pictorial representations - I can record my work using +, - and =	- I can use addition facts to within to find related subtraction facts. - I can subtract two 1-digit numbers using manipulatives or pictorial representations - I am beginning to work out the value of a missing number.	- I can recall addition and subtraction facts within 20. - I can add and subtract 1-digit and 2-digit numbers to 20, including zero using manipulatives or pictorial representations I am beginning to know that addition is commutative but subtraction is not. - I can work out the value of a missing number, e.g. 30 - ? = 24.	**- I can read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.** **- I can represent and use number bonds and related subtraction facts within 20** **- I can add and subtract 1-digit and 2-digit numbers to 20, including zero.** **- I can solve missing number problems such as 7 = ? – 9.**
	Multiplication and Division	- I understand multiplication as repeated addition, grouping or represented I understand division as repeated subtraction, sharing or represented in an array. I am beginning to use one to many correspondence to count more efficiently.	I am beginning to know 2 and 10 table facts up to x5 without counting.	- I can solve one-step problems involving multiplication and division, by calculating the answer using arrays with the support of the teacher. - I know doubles of numbers to 10 and corresponding halves to 20, relating to the x2 table. **I know 2, 5 and 10 table facts up to x5 without counting.**	**- I can 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.**
Geometry	**Properties of shape**	- I can recognize common 2-D shapes. I can recognise common 3-D shapes.	I can recognise and name common 2D and 3D shapes.	I can recognise and name 2D and 3D shapes in different orientations and sizes.	**- I can recognise and name common 2-D shapes including:** **2-D shapes (e.g. rectangles (including squares), circles and triangles** **3-D shapes (e.g. cuboids (including cubes), pyramids and spheres).**
	Position and Direction	I can follow instructions using the language of position and direction. backwards, *(e.g. left, right and half turn in both directions.)*	I can give instruction using the language of position and direction *(e.g. left, right and half-, quarter- and three-quarter-turns in both directions)* when I am facing the same direction	- I can recognise whole, half, quarter and three-quarter turns. I can give instruction using the language of position and direction *(e.g. left, right and half-, quarter and three-quarter turn in both directions)* when I am in a fixed position.	**- I can describe position, directions and movements, including half, quarter and three- quarter turns.**

Year 1	Step 4	Step 5	Step 6	End of year Expectations
Measurement	- I can describe: *- Lengths and heights (e.g. long/short)* *- Mass or weight (e.g. heavy/light)* *- Capacity/ volume (full/empty,* *- Time (quick, slow).*	- I can compare and describe: *- Lengths and heights (e.g. longer/ shorter, tall/ short, double/half)* *- Mass or weight (e.g. heavier than, lighter than)* *- Capacity/ volume (e.g. more than, less than, quarter)* *- Time (e.g. quicker, slower, earlier, and later).*	- I can solve practical problems for: *- Lengths and heights (e.g. long/short, longer/ shorter, tall/ short, double/half)* *- Mass or weight (e.g. heavy/light, heavier than, lighter than)* *- Capacity/ volume (full/empty, more than, less than, quarter)* *-Time (quicker, slower, quicker, later)*	**- I can compare, describe and solve practical problems for:** ***- Lengths and heights (e.g. long/short, longer/ shorter, tall/ short, double/half)*** ***- Mass or weight (e.g. heavy/light, heavier than, lighter than)*** ***- Capacity/volume (full/empty, more than, less than, quarter)*** ***- Time (quicker, slower, earlier, later).***
	- I can measure using non standard units: *- Lengths and heights* *- Mass/weight* *- Capacity and volume* *- Time (hours, minutes, seconds).*	-I can measure standard units using familiar tools: *- Lengths and heights (cm/m)* *- Mass/weight (Kg)* *- Capacity and volume (L)* *- Time (hours, minutes, seconds).*	- I can compare and am beginning to record in manageable: *- Lengths and heights (cm/m)* *- Mass/weight (Kg)* *- Capacity and volume (L)* *- Time (hours, minutes, seconds).*	**- I can measure and am beginning to record the following:** ***- Lengths and heights*** ***- Mass/weight*** ***- Capacity and volume*** ***- Time (hours, minutes, seconds).***
Measurement - Money	- I am beginning to understand the language involved with money I can recognise 1p, 2p, 5p, 10p and 20p coins and am beginning to understand their relative values.	- I can recognise that money has a value I can recognise 1p, 2p, 5p, 10p and 20p coins and understand their relative values.	- I can recognise and know the value of different denominations of coins and notes (50p, £1, £5, £10 and £20) and am beginning to understand their relative values.	**- I can recognise and know the value of different denominations of coins and notes.**
Measurement - Time	- I can recognise the language first, next, today, yesterday and tomorrow.	- I can use the language first, next, today, yesterday and tomorrow.	- I am beginning to sequence events in a chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.	**- I can sequence events in a chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening**
	- I know the days of the week. - I am beginning to tell the time to the hour.	- I can tell the time to the hour and draw the hands on a clock face to show these times.	- I am beginning to know the months of the year. - I can tell the time to half past - I can recognise and use language relating to dates, including days of the week, weeks, months and years	**- I can recognise and use language relating to dates, including days of the week, weeks, months and years.** **- I can tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.**

Year 2		Step 7	Step 8	Step 9	End of year Expectations
Problem Solving		**- I can use place value and number facts to solve problems.** **- I can solve problems with addition and subtraction:** ***using concrete objects and pictorial representations, including those involving numbers, quantities and measures*** ***applying my increasing knowledge of mental and written methods.*** **- I can solve problems involving multiplication and division using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.** **- Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.**			
Number	**Place Vlaue**	- I can partition numbers into tens and ones using practical apparatus. - I can order numbers from 0 to 100. - I can read and write numbers to 50 in words. - I am beginning to understand the role of 0 as a place holder.	- I can partition numbers into tens and ones using a number sentence. - I can compare numbers from 0 to 100 using mathematical language. - I can read and write numbers to at least 100. - I understand the role of 0 as a place holder.	- I can understand the place value of 2 digit numbers through relating concrete objects to pictorial representations (e.g. the 100 square). - I can partition numbers in different ways. e.g. (23= 20+3: 23=10+13). - I can use <, > and = signs when comparing and ordering numbers. - I can read and write numbers to at least 100 in words.	**- I can recognise the place value of each digit in a 2-digit number (tens and ones).** **- I can identify, represent and estimate number using different representations including number line.** **- I can compare and order numbers from 0 up to 100; use <, > and = signs.** **- I can read and write numbers to at least 100 in numerals and in words.**
	Counting	- I can count in steps of 2, 5 and 10 forwards and backwards	I can count in steps of 2, 5 and 10 forwards and backwards fluently.	- I can count in steps of 2,5 and 3 forwards and backwards and can count in tens from any given number.	**I can count in steps of 2, 3 and 5 from 0, and in tens from any number forwards and backwards.**
	Fractions and Decimals	- I can recognise, read, find, name and write fractions 1/4 , 2/4 and of a shape, length and discrete (countable) and continuous (measures) quantities. - I can count in steps of ½ to 10. - I can write simple fractions e.g. $^1/_2$ of 6 = 3.	- I can recognise, find, name and write fractions ¼ 2/4 and ¾ of a shape, length and discrete (countable) and continuous (measures) quantities. I can count in steps of ½ and ¼ to 10.	- I can recognise, find, name and write fractions 1/3, ¼ 2/4 and ¾ of a shape, length and discrete (countable) and continuous (measures) quantities. - I can recognise the equivalence of 2/4 and $^1/_2$. I can count in steps of 1/3 to 5.	**- I can recognise, find, name and write fractions 1/3, ¼ 2/4 and ¾ of a length, shape, set of objects or quantity.** **- I can write simple fractions e.g. $^1/_2$ of 6 = 3 and recognise the equivalence of 2/4 and $^1/_2$.**

Year 2		Step 7	Step 8	Step 9	End of year Expectations
Calculating	**Addition and Subtraction**	- I am beginning to recall and use addition and subtraction facts to 20. I know that addition is commutative but subtraction is not. I know that addition and subtraction are inverses - I can add and subtract numbers using concrete objects, pictorial representations and mentally including: *A 2-digit number and ones* *A 2-digit number and tens* *Adding three 1-digit numbers.*	- I can recall and use addition and subtraction facts to 20 fluently. I can use the fact that addition is commutative but subtraction is not. I can use the that addition and subtraction are inverses - I can add and subtract numbers using concrete objects, pictorial representations and mentally including: *A 2-digit number and ones* *A 2-digit number and tens* *Adding three 1-digit numbers.* *Two 2-digit numbers*	- I can derive and use related facts up to 100. I am beginning to record the addition of 2 2-digit numbers in a vertical format.	**- I can recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.** **- I can add and subtract numbers using concrete objects, pictorial representations, and mentally, including:** ***A 2-digit number and ones*** ***A 2-digit number and tens*** ***Two 2-digit numbers*** ***Adding three 1-digit numbers.***
	Multiplication and Division	- I am beginning to recall and use multiplication and division facts for the 2 times tables including recognising odd and even numbers. - I am beginning to use x and ÷ and = to record my work. - I am beginning to know that multiplication can be done in any order but division cannot. I am beginning to know the 2 and 10 times table facts up to x12 without counting.	- I can recall and use multiplication and division facts for the 10 times tables. - I can recognise that multiplication of two numbers can be done in any order and division of one number by another cannot. - I can use x and ÷ and = to record my work. I know the 2 and 10 timestable facts up to x12 without counting. I am beginning to know the 5 times table facts up to x12 without counting.	- I can recall and use multiplication and division facts for the 5 times tables, including recognising odd and even numbers. - I can use the fact that multiplication of two numbers can be done in any order and division of one number by another cannot. I know the 5 times table facts up to x12 without counting.	**- I can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.** **- I can calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.** **- I can show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.**

Year 2		Step 7	Step 8	Step 9	End of year Expectations
Geometry	**Properties of shapes**	- I am beginning to describe the properties of 2-D shapes. - I am beginning to describe the properties of 3-D shapes. - I am beginning to compare and sort 2D and 3D shapes and everyday objects according to their geometrical properties	- I can identify and describe the properties of a wide range of 2-D shapes including the number of sides. - I can identify and describe the number of edges, vertices and faces in 3-D shapes. - I can compare a wide range of 2D and 3D shapes. - I can recognise 2-D shapes on the surface of 3-D shapes.	- I can identify and describe symmetry in a vertical line of 2-D shapes. I can read and write the names for common 2D and 3D shapes andam beginning to use the suffixes (e.g. oct, hex, dec etc) to help me remember the number of sides/ faces. I can draw lines and shapes with a straight edge.	**- I can identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line.** **- I can identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces** **-I can identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid.** **- I can compare and sort common 2D and 3D shapes in everyday objects.**
	Position and Direction	- I can respond to instructions using mathematical vocabulary to describe position, direction and movement (including movement in a straight line) - I can order and arrange combinations of mathematical objects.	- I can give instructions using mathematical vocabulary to describe position, direction and movement including distinguishing between rotation as a turn for quarter, half and three-quarter turns anti-/ clockwise	- I can recognise directions using mathematical vocabulary in terms of right angles for quarter, half and three-quarter turns (ant/clockwise).	**- I can order and arrange combinations of mathematical objects in patterns and sequences** **- I can use mathematical vocabulary to describe position, direction and movement including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line.**
Measurement		- I am beginning to measure length/ height in any direction (m/cm); mass (kg/g); temperature (℃); capacity (litres/ml). - I can directly compare lengths, mass, volume/capacity.	- Using standard units I can estimate and measure length/ height in any direction (m/cm); mass (kg/g); temperature (℃) capacity (litres/ml). - I can order lengths, mass, volume/capacity using measures using <, > and =	- I can choose an appropriate standard unit to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels. - I can record my results using <,> and =. I can compare measures including simple multiples (*e.g. half as high, twice as heavy)*	**- I can choose and use appropriate standard units to estimate and measure length/ height in any direction (m/cm); mass (kg/g) ;temperature (℃); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.** **- I can compare and order lengths, mass, volume/capacity and record the results using <, > and =.**

Year 2	Step 7	Step 8	Step 9	End of year Expectations
Measurement – Money	- I can recognise and use the symbols for pounds (£) and pence (p). I can count coins up to a value of £5 I can combine amounts to make a particular value (up to £2) - I am beginning to solve addition/ subtraction problems involving money.	- I can recognise and use the symbols for pounds (£) and pence (p). - I am beginning to solve problems involving giving change from multiples of 10p using counting up.	- I can find combinations of coins that equal the same amounts of money. **- I can solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.** - I am beginning to solve problems involving giving change including change from non-multiples of 10 using counting up.	**- I can recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.** **- I can find different combinations of coins that equal the same amounts of money** **- I can solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.**
Measurement - Time	- I can compare and sequence intervals of time. - I am beginning to know quarter past/to the hour. - I am beginning to recognise 5 minutes intervals.	-I am beginning to work out time durations for half/ quarter hours. - I can draw the hands on a clock to show quarter hours. - I know the amount of minutes in an hour.	- I can tell the time in 5 minute intervals and begin to write the hands on a clock to show these times. - I know the amount of hours in a day. **- I can compare and sequence intervals of time**	**- I can compare and sequence intervals of time** **I can tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.** **- I know the number of minutes in an hour and the number of hours in a day.**
Statistics	- I can discuss how I collected the data - I can discuss the data I have collected	- I can collect data and record it in a simple list, simple table and tally chart. - I can ask and answer questions about the data I have collected. - I am beginning to compare the data.	- I can collect data and record it in a simple pictogram (using ratios of 2, 5 and 10) and block diagram. - I can draw simple conclusions about the data that I have collected. - I can make comparisons about the data I have collected.	**- I can interpret and construct simple pictograms, tally charts, block diagrams and simple tables.** **- I can ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.** **- I can ask and answer questions about totalling and comparing categorical data.**

Year 3		Step 10	Step 11	Step 12	End of year Expectations
Problem solving		- To solve one-step and two-step questions - To solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. - To solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence - To solve problems in which n objects are connected to m objects. - To solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. - I can solve problems that involve all of the information on fractions.			
Number	**Place Value**	- I can find 10 and 100 more and less than a given number using concrete materials - I am beginning to recognise the place value of each digit in a 3-digit number	- I can compare and order numbers up to 1,000 based on the hundreds column - I can find 10 and 100 more and less than a given number using - I can identify, represent and estimate numbers using different representations* ***(Allow children to use range of apparatus such as Numicon, counting sticks, cubes, 100 squares etc).**	- I can read, write, compare and order numbers up to 1,000 in numerals and words - I can recognise the place value of each digit in a 3-digit number	**- I can read and write numbers up to 1,000 in numerals and in words** **- I can recognise the place value of each digit in a 3-digit number (hundreds, tens, ones).** **- I can compare and order numbers up to 1,000** **- I can identify, represent and estimate numbers using different representations.**
	Counting	- I can count fluently from 0 in steps of 50 and 100 - I can count forwards and backwards from 0 in steps of 3 and 4.	- I can count forwards and backwards from 0 in steps of 3, 4 and 8.	I can count forwards and backwards in 10s or 100s from any number.	**- I can count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number**

Year 3		Step 10	Step 11	Step 12	End of year Expectations
	Fractions and Decimals	- I can count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts - I can begin to recognise, find and write fractions of a discrete set of objects: unit fractions - I can begin to recognise and show, using diagrams, equivalent fractions with small denominators. (1/2, ¼, 1/3) - I can compare fractions with the same denominators.	- I can count up and down in tenths; recognising that tenths arise by dividing one-digit numbers or quantities by 10. - I can begin to recognise, find and write fractions of a discrete set of objects: non-unit fractions with small denominators. - I can add and subtract fractions with the same denominator within one whole using concrete materials and pictorial representations - I can compare and order unit fractions on a number line < 1	- I can 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 10. - I can recognise, find and write fractions of a discrete set of objects and numbers: unit fractions and non-unit fractions with small denominators. - I am beginning to compare and order unit fractions on a number line > 1	**- I can 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 10.** **- I can recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.** **- I can recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.** **- I can recognise and show, using diagrams, equivalent fractions with small denominators.** **- I can add and subtract fractions with the same denominator within one whole.** **- I can compare and order unit fractions, and fractions with the same denominators.**
Calculating	**Addition and Subtraction**	- I can add a three-digit number and 1s (HT1s1s), mentally - I can add and subtract up to 3 digit numbers informally. - I can add and subtract numbers with 2 digits, using formal written methods of columnar addition and subtraction without regrouing. -I can add and subtract 2 2-digit numbers within 100, mentally. - I can begin to estimate the answer to a calculation.	- I can add a three-digit number and 10s (HT1s+T1s), mentally - I can add and subtract numbers with 3 digits, using formal written methods of columnar addition and subtraction without regrouping. - I can estimate the answer to a calculation. -I can add and subtract 2 2-digit numbers beyond 100, mentally.	- I can add a three-digit number and 100s (HT1s+HT1s). - I can add and subtract numbers with 3 digits, using formal written methods of columnar addition and subtraction with regrouping.. - I can use inverse operations to check answers.	**- I can add and subtract numbers mentally.** **- I can add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction.** **- I can estimate the answer to a calculation and use inverse operations to check answers.**

Year 3		Step 10	Step 11	Step 12	End of year Expectations
	Multiplication and Division	- I can recall and use multiplication and division for the 3 and 4 times tables up to x 5 - I can use the multiplication tables I know to help me calculate (mentally) mathematical statements for multiplication and division (e.g. 2x3=6 so 2x30=60; 6÷2=3 so 60÷2=30). I understand multiplication as scaling. I show multiplication is distributitive using arrays. (e.g. 2 x 24 = (2 x 20) + (2 x 4)	- I can recall and use multiplication and division for the 3 and 4 times tables up to x12 I can recall the 8 times table facts up to x5. -I can see the relationship between the 2, 4 and 8 times table and use this to help me to remember the facts. - I can use the multiplication tables I know to help me write and calculate mathematical statements for multiplication and division.	- I can recall and use multiplication and division for the 8 times tables up to x12. - I can use formal written methods to write and calculate mathematical statements for multiplication (T1s x 1s) and division. (T1s ÷ 1s, no remainder) for known timestables.	**- I can recall and use multiplication and division for the 3, 4 and 8 times tables.** **- I can write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.**
Geometry	**Properties of Shape**	- I can draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. -I can recognise 2D and 3D shapes with line symmetry.	- I can recognise angles as a property of shape or a description of a turn. - I can identify whether angles are greater than or less than a right angle. - I can identify horizontal and vertical lines and	- I can recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn. - I can identify pairs of perpendicular and parallel lines.	**- I can draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.** **- I can recognise angles as a property of shape or a description of a turn.** **- I can identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle.** **- I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines.**
Measurement		- I can measure and compare: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) using mixed units - I can measure the perimeter of simple 2D shapes.	- I can add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) using mixed units	- I can measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) using simple equivalents of mixed units where appropriate (*e.g. comparing 1L with 750ml)*	**- I can measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).** **- I can measure the perimeter of simple 2-D shapes.**
Measurement – Money		- I can add and subtract amounts of money to give change up to the next £1	- I can add and subtract amounts of money to give change, beginning to use both £ and p in practical contexts up to £5	- I can add and subtract amounts of money to give change, using both £ and p in practical contexts.	**- I can add and subtract amounts of money to give change, using both £ and p in practical contexts.**

Year 3	Step 10	Step 11	Step 12	End of year Expectations
Measurement - Time	- I can tell and write the time from a 12-hour digital and analogue clock - I can estimate and read time in 5 minute and 1 minute intervals. - I can use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. - I am beginning to know the number of seconds in a minute and the number of days in each month, year and leap year.	- I can tell and write the time from a 24-hour digital clock. - I can record and compare time in terms of seconds, minutes and hours. - I know the number of seconds in a minute and the number of days in each month, year and leap year. - I can recognise and know the value of different denominations of coins .	- I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. - I can compare durations of events (for example, to calculate the time taken by particular events or tasks).	**- I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.** **- I can estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight.** **- I know the number of seconds in a minute and the number of days in each month, year and leap year.** **- I can compare durations of events (for example, to calculate the time taken by particular events or tasks).**
Statistics	- I can read and insert data into bar charts, pictograms and tables.	- I can draw, read and insert data into bar charts, pictograms and tables. - I can ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.	- I can interpret and construct simple pictograms, tally charts, block diagrams and simple tables - I can ask and answer simple questions about totaling and comparing categorical data.	**- I can interpret and present data using bar charts, pictograms and tables.**

Year 4		Step 13	Step 14	Step 15	End of year Expectations
Problem solving		**- I can solve number and practical problems using all of my number skills and with increasingly large positive numbers. - I can solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. - I can solve simple measure and money problems involving fractions and decimals to two decimal places. - I can solve addition and subtraction two-step problems in contexts, deciding which operations to use and why. - I can solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. - I can solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.**			
Number	**Place Value**	- I am beginning to find 1000 more or less than a given number. - I can find 1000 more or less than a given number. - I can recognise the place value of each digit in a three digit number - I am beginning to recognise the place value of each digit in a four digit number. I can round any number to the nearest 1000. - I can read Roman numerals to 50 (I to L).	- Using a variety of representations, including measures, I am fluent in comparing and ordering numbers beyond 1000. - I can recognise the place value of each digit in a four digit number. - I can round any number to the nearest 10 and 100 - I can read many Roman numerals to 100 (I to C).	- I can round any number to the nearest 1000 and 100 and 10. - I can read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	**- I can count in multiples of 6, 7, 9, 25 and 1000. - I can find 1000 more or less than a given number. - I can count backwards through zero to include negative numbers. - I can recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones). - I can compare and order numbers beyond 1000. - I can identify, represent and estimate numbers using different representations. - I can round any number to the nearest 10, 100 and 1000. - I can read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.**
	Counting	- I can count in multiples of 1000 - I can count in multiples of 25. - I am beginning to count in multiples of 6	- I can count in multiples of 6 and 7 sometimes counting on to find the next number fluently	- I can count fluently in multiples of 6, 7, 9, 25 and 1000. - I can count backwards through zero to include negative numbers.	

Year 4		Step 13	Step 14	Step 15	End of year Expectations
	Fractions and decimals	- I am beginning to extend the use of number line to connect fractions, numbers and measures. - I am beginning to recognise and write decimal equivalents, e.g. to ½, ¼, ¾ using a numberline to zoom in. -I can find the effect of dividing a one- or two-digit number by 10, identifying the value of the digits in the answer as ones and tenths. - I can count forwards and backwards in tenths expressed as decimals I am beginning to use factors and multiples to find families of common equivalent fractions using concrete representations and pictorial representations. - I can compare numbers with the same number of decimal places up to one decimal place.	- I can extend the use of number line to connect fractions, numbers and measures. - I can recognise that hundredths arise when dividing an object/whole number by one hundred. - I can add and subtract fractions (with the same denominator) to solve problems beyond one whole. - I can recognise and write decimal equivalents, e.g. to ½, ¼, ¾. - I am beginning to make connections between fractions of a length, of a shape and as a representation of one whole or set of quantities. I can find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. I can use factors and multiples to find families of common equivalent fractions using concrete representations and pictorial representations. - I can compare numbers with the same number of decimal places up to two decimal places.	- I can use factors and multiples to recognise equivalent fractions and simplify where appropriate (e.g., 6/9 = 2/3). - I can recognise that hundredths arise when dividing tenths by ten. - I can make connections between fractions of a length, of a shape and as a representation of one whole or set of quantities. - I can fluently add or subtract fractions with the same denominator. - I can recognise and write the decimal equivalents to any number of tenths or hundredths, as well as ¼, ½, ¾. - I can round decimals with one decimal place to the nearest whole number.	**- I can recognise and show, using diagrams, families of common equivalent fractions.** **- I can count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.** **- I can add and subtract fractions with the same denominator.** **- I can recognise and write decimal equivalents of any number of tenths or hundredths.** **- I can recognise and write decimal equivalents to 1/4, 1/2, 3/4.** **- find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.** **- I can round decimals with one decimal place to the nearest whole number.** **- I can compare numbers with the same number of decimal places up to two decimal places.**
Calculating	**Addition and Subtraction**	- I am beginning to add numbers with 4 digits using formal written methods of columnar addition and subtraction and mentally where more efficient. - I am beginning to estimate and use inverse operations to checks answers to a calculation involving 4 digit numbers,	- I can add and subtract numbers with up to 4 digits using formal written methods of columnar addition and subtraction where appropriate without regrouping, - I can use inverse operations to check answers to a calculation.	- I can estimate the answer to a calculation and say whether my answer is likely. - I can add and subtract numbers with up to 4 digits using formal written methods of columnar addition and subtraction where appropriate with regrouping required once.	**- I can add and subtract numbers with up to 4 digits using formal written methods of columnar addition and subtraction where appropriate.** **- I can estimate and use inverse operations to check answers to a calculation.**

Year 4		Step 13	Step 14	Step 15	End of year Expectations
	Multiplication & Division	- I can recall multiplication and division facts for the 2, 3, 4, 5, 8 and 10 x tables with fluency. -I can recall the 6 and 9 times table up to x5. - I can multiply mentally by 0 and 1 and divide any number by 1. - I can recognise and use factor pairs for numbers to 20 and commutativity in mental calculations. - I am beginning to multiply two digit-digit and three-digit numbers by a one-digit number using formal written layout supported by diagrams (e.g. a grid representation)	- I can recall multiplication and division facts for the 6, 7 and 9 times tables up to x12 -I can see the relationship between the 3, 6 and 9 times table and use this to help me to remember the facts. - I can multiply together three numbers. - I can recognise and use factor pairs for numbers to 30 and commutativity in mental calculations. - I can use the formal written method of short multiplication (2 digit by 1 digit and short division (2-digit ÷ 1 digit) with exact answers.	- I can recall multiplication and division facts for multiplication tables up to 12 x 12. - I can use my multiplication tables knowledge to calculate mentally with multiples of ten. - I can recognise and use factor pairs for numbers to 50 and commutativity in mental calculations. - I can write statement about the equality of expressions. E.g., 37 x 9 = 30 x 9 + 7 x 9 (2 x 3) x 4 = 2 x (3 x 4) - I can use the formal written method of short multiplication (3 digit by 1 digit and short division (3 digit ÷ 1 digit) with exact answers.	**- I can recall multiplication and division facts for multiplication tables up to 12 x 12.** **- I can use place value, known and derived facts to multiply and divide mentally, including: by 0 and 1; dividing by 1; multiplying together three numbers.** **- I can recognise and use factor pairs and commutativity in mental calculations.** **- I can multiply two-digit and three-digit numbers by a one-digit number using formal written layout.**
Geometry	**Properties of Shape**	- I can compare and classify geometric shapes based on their properties and sizes. - I can identify acute and obtuse angles in 2D shapes - I can identify lines of symmetry in 2D shapes. - I can draw symmetric patterns using a variety of media.	- I can compare and classify triangles (for example, right angled, equilateral, isosceles and scalene) using geometric properties. - I can compare lengths and angles to decide if a polygon is regular and irregular. - I can identify lines of symmetry in 2D shapes in different orientations.	- I can compare and classify quadrilaterals (for example, parallelogram, trapezium, rhombus) using geometric properties - I can compare and order angles up to two right angles by size by using a protractor to the nearest multiple of 10 - I can recognise line symmetry in a variety of diagrams, including where the line of symmetry does not dissect the original shape. - I can complete a simple symmetric figure with respect to a specific line of symmetry.	**- I can compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.** **- I can identify acute and obtuse angles and compare and order angles up to two right angles by size.** **- I can identify lines of symmetry in 2D shapes presented in different orientations.** **- I can complete a simple symmetric figure with respect to a specific line of symmetry.**
	Position and Direction	- I am beginning to plot coordinates in the first quadrant on a 2D grid. - I understand the meaning of the x and y axis.	- I can draw a pair of axis in one quadrant with equal scales and integer labels. - I can read, write and use pairs of co-ordinates (e.g., (2,5)) in the first quadrant. - I am beginning to describe movements between positions as translations of a given unit to the left/right and up/down.	- I can describe positions on a 2-D grid as coordinates in the first quadrant. - I can describe movements between positions as translations of a given unit to the left/right and up/down. - I can plot specified points and draw sides to complete a given polygon. - I can use co-ordinate plotting ICT tools.	**- I can describe positions on a 2-D grid as coordinates in the first quadrant.** **- I can describe movements between positions as translations of a given unit to the left/right and up/down.** **- I can plot specified points and draw sides to complete a given polygon.**

Year 4	Step 13	Step 14	Step 15	End of year Expectations
Measurement	- I can convert between units of length, capacity and mass (g, kg), using multiplication to convert from larger to smaller unit given the ratio to convert with. e.g. 1Km = 1000m 1Kg = 1000g 1L=1000ml 1m = 1000mm - I can estimate and compare length. - I am beginning to measure and calculate the perimeter of squares and rectangles in cm and m. - I can measure and calculate the perimeter of squares and rectangles in cm and m.	- I can convert between units of length, capacity and mass (g, kg), using multiplication to convert from larger to smaller unit given the ratio to convert with. 1m = 100cm £1 = 100p 1cm = 10mm - I can estimate and compare length, capacity and mass. - I can express perimeter algebraically as 2(a + b) where a and b are the dimensions in the same unit.	- I can convert between different units of measure. - I can estimate, compare and calculate different measures, - I can measure and calculate the perimeter of a range of rectilinear polygons in cm and m. - I can find the area of a shape by counting squares. - I can relate this to arrays and multiplication.	**- I can convert between different units of measure (e.g. kilometre to metre; hour to minute).** **- I can measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.** **- I can find the area of rectilinear shapes by counting squares.** **- I can estimate, compare and calculate different measures, including money in pounds and pence.**
Measurement - Money	- I can calculate money in £ and p	- I am beginning to estimate and compare money in £ and p.	- I can use my understanding of decimal notation and place value to record metric measures, including money. - I can estimate, compare and calculate money in pounds and pence.	**- I can estimate, compare and calculate different measures, including money in pounds and pence.**
Measurement - Time	- I can read and write the time on analogue 12- and 24-hour clocks - I can read and write the time on digital 12-hours clocks. - I am beginning to convert hours to minutes. - I can solve simple conversion problems.	- I read and write the time on 12- and 24-hour digital clocks. - I can convert time between analogue and digital 12-hour clocks. - I can convert minutes to seconds; years to months and weeks to days and vice versa. - I can solve one-step conversion problems in contexts, deciding which operations to use and why.	- I can read, write and convert time between analogue and digital 12- and 24-hour clocks. - I can solve more complex one- step conversion problems in contexts, deciding which operations to use and why.	**- I can read, write and convert time between analogue and digital 12- and 24-hr clocks.**

Year 4	Step 13	Step 14	Step 15	End of year Expectations
Statistics	- I can interpret discrete data using appropriate graphical methods, including bar charts - I can solve comparison, sum and difference problems using information in presented in bar charts and pictograms. I recognise discrete data (countable). I recognise continuous data (measures)	- I can interpret discrete data using appropriate graphical methods, including bar charts - I can interpret continuous data using time graphs - I can solve comparison, sum and difference problems using information presented in bar charts, pictograms and tables. I can interpret a range of scales in a variety of representations of data.	- I can interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. - I can use a range of scales in my representations. - I am beginning to relate the graphical representation of data to recording change over time. - I can solve comparison, sum and difference problems using information in bar charts, pictograms, tables and other graphs.	**- I can interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.** **- I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.**

Year 5		Step 16	Step 17	Step 18	End of year Expectations
Problem solving		**- I can solve number and practical problems using all of my number skills.** **- I can solve problems involving number up to three d.p.** **- I can solve problems using multiplication and division and a combination of these including understanding the equals sign.** **- I can solve problems involving multiplication and division including scaling by simple fractions and problems involving simple ratios.** **- I can solve problems which require knowing percentage and decimal equivalents of ½ , 1/4 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25.** **- I can solve problems using multiplication and division using my knowledge of factors and multiples square and cubes.** **- Solve problems involving multiplying and adding, including integer scaling problems** **- I can solve problems involving converting between units of time.** **- I can use all four operations to solve problems including measure(e.g. length, mass, volume, money) using decimal notation including scaling.**			
Number	**Place Value**	- I can read, write and order numbers to at least 10 000 and determine the value of each digit. - I can round any 5 digit number to the nearest 10, 100, 1000. -I can read Roman numerals to 500 (I – D). - I can read, write, order and compare numbers with 1 d.p. I can find complements for 1 with tenths (1 d.p.) I can add and subtract 0.1 mentally to other numbers to 1 d.p.	-I can round any 5 number to the nearest 10, 100 and 1000, 10 000 - I can round decimals with one d.p. to the nearest whole number - I can read Roman numerals to1000 (I – M) - I can read, write, order and compare numbers with up to 2 d.p. I can find complements for 1 with tenths and hundredths (2 d.p.) I can add and subtract 0.01 mentally to other numbers to 2 d.p.	- I can read, write and order numbers to at least 100 000 and determine the value of each digit. - I can put negative numbers onto a number line. - I can round any number up to 1 000 000 to the nearest 10, 100, 1,000, 10 000 and 100 000. - I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents I can round decimals with two d.p. to the nearest whole number and to one d.p. - I can read, write, order and compare numbers with up to 3 d.p. I can solve problems involving numbers to three d.p.	**- I can read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.** **- I can interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through 0.** **- I can round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000.** **- I can read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.** **- I can read, write, order and compare numbers with up to 3 d.p.** **- I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents** **I can round decimals with two d.p. to the nearest whole number and to one d.p.**
	Counting	- I can count forwards and backwards in 10 000 from any given number up to 1 000 000. - I can count forwards and backwards through 0 including negative numbers.	- I can count forwards and backwards in 100 000 from any given number up to 1 000 000.		**- I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.**

Year 5		Step 16	Step 17	Step 18	End of year Expectations
	Fractions and decimals	I can compare and order fractions whose denominators are the same using concrete materials and visual representations. I can find equivalent fractions for a /x by multiplying the numerator and denominator by the same multiple. - I can understand mixed numbers and position them on a number line - I can recognise the percent symbol (%) and understand percent means number of parts per hundred I can simplify fractions < 1 by dividing the numerator and denominator by the highest common factor.	- I can compare and order fractions whose denominators are the same. - I can read and write decimal numbers as fractions over 10 and 100. - I am beginning to add and subtract fractions with the same denominator and multiples of the same number. - I know the decimal equivalents of 1/5,2/5, 3/5 and 4/5. - I can multiply proper fractions by a whole number using materials and diagrams. - I can recognise the percent symbol (%) and understand percent means number of parts per hundred and write percentages as a fraction with a denominator 100 I can simplify fractions > 1 into integers and other fractions. (E.g. 17/3 = 5 2/3)	- I can compare and order fractions whose denominators are multiples of the same number. - I can add and subtract fractions with the same denominator and multiples of the same number. - I can write mathematical statements for addition and subtraction of fractions - I know the decimal equivalents of those with a denominator of a multiple of 5, 10 or 25. - I can multiply mixed numbers by a whole number using materials and diagrams. I am beginning to use scaling to find equivalent decimal equivalents of non-unit fractions where the denominator is a factor of 100 or multiple of 10. (e.g. 4/20 = 2/10 (0.2) or 20/100 (0.2) - I can recognise the percent symbol (%) and understand percent means number of parts per hundred and write percentages as a fraction with a denominator 100 and as a decimal I can convert integers and fractions into an improper fraction. E.g. 5 2/3 = 17/3	**- I can compare and order fractions whose denominators are multiples of the same number.** **- I can add and subtract fractions with the same denominator and multiplies of the same number.** **- I can recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <1 as mixed numbers e.g. 2/5 + 4/5 = 6/5 = 1 1/5** **- I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.** **- I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.** **- I can read and write decimal numbers as fractions** **- I can recognise the percent symbol (%) and understand percent means number of parts per hundred and write percentages as a fraction with a denominator 100 and as a decimal**

Year 5		Step 16	Step 17	Step 18	End of year Expectations
Calculating	**Addition &Subtraction**	- I can add and subtract numbers with 4 digits using formal written methods of columnar addition and subtraction where appropriate with or without regrouping any number of times. - I can add and subtract mentally a four digit number and multiple of 10, 100 or 1000 or a combination of these (E.g +/- 2300) - I can use rounding to estimate the answer to a calculation.	I am beginning to add and subtract whole numbers with more than 4 digits using formal columnar addition. - I can add and subtract mentally a five digit number and multiple of 10, 100 or 1000, 10 000 or a combination of these (E.g +/- 23 000) - I can use rounding to estimate the answer to a calculation. I am beginning to add and subtract numbers to 2 d.p. using the formal written method.	- I can add and subtract mentally a six digit number and multiple of 10, 100 or 1000, 10 000 or a combination of these (E.g +/- 23 000) - I can estimate the answer to a calculation using rounding and say whether my answer is likely. - I can solve addition and subtraction two-step problems in contexts, deciding which operations to use and why. - Can solve more complex one-step problems in contexts, deciding which operations to use and why. I can add and subtract numbers to 2 d.p. using the formal written method.	**- I can add and subtract whole numbers with more than 4 digits including using formal written methods (columnar addition and subtraction).** **- I can add and subtract numbers mentally with increasingly large numbers** **I can use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.** **- I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.**
	Multiplication and division	- I can find factors for numbers to 50 and beyond. - I can recall and use multiplication and division facts for all tables up to 12 x 12 - I can divide 3-digit numbers by a 1-digit number using short division supported with concrete materials with remainders. - I can multiply up to 4 digit numbers by one digit numbers using the formal short multiplication method - I can tell whether a number up to 100 is a prime number and use the vocabulary of prime numbers - I can recognise square and cube numbers and their notation. I express non-integer answers to division as a remainder.	- I am beginning to recognise and use factor pairs and common factors of two numbers commutatively in mental calculations - I can recall and use mentally multiplication and division facts for all tables up to 12 x 12 - I can divide a 4-digit number by a one digit number using the formal short-division method without remainders - I can multiply a 2 digit number by a 2 digit number using the expanded long multiplication method. - I can recall prime numbers up to 19 and use the vocabulary of prime factors - I can recognise and use square numbers and their notation. I express non-integer answers to division as a fraction.	- I can recognise and use factor pairs and common factors of two numbers commutatively in mental calculations - I can recognise and use multiples in mental calculations - I can divide up to a four-digit number by a one-digit number using the formal short division method with remainders - I can multiply a 2 digit number by a 2 digit number using the formal long multiplication method. - I can recognise and use cube numbers and their notation. - I can recall prime numbers up to 19 and use the vocabulary of prime factors non-prime numbers I express non-integer answers to division as a decimal to 1 d.p..	**- I can identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers.** **- I can multiply and divide numbers mentally using known facts.** **- I can divide numbers up to four-digits by a one-digit number using the formal written method of short division and interpret remainders appropriately and according to context** **- I can multiply numbers up to four-digits by a one- or two digit number using the formal written method including long multiplication for two digit numbers.** **- I know and use the vocabulary of prime numbers, prime factors and composite(non-prime) numbers.** **- I can tell whether a number up to 100 is a prime number and recall prime numbers up to 19.** **- I can recognise and use square numbers and cube numbers and their notation.**

Year 5		Step 16	Step 17	Step 18	End of year Expectations
Geometry	**Properties of Shape**	- I can identify and use mathematical language to describe properties of 3D shapes. - I can measure given angles using a protractor to the nearest 5° - I can describe mathematical properties of regular and irregular polygons using precise vocabulary.. I understand an angle on a point on a straight line is 180°	- I am beginning to identify 3D shapes, including cubes and cuboids, from 2D representations. - I can identify what acute, obtuse and reflex angles are. I can measure given angles using a protractor to the nearest 1° - I can identify multiples of 90 degrees when measuring angles I understand an angle on a single point is a whole turn I can draw polygons accurately using a ruler to the nearest mm and protracter to the nearest 1°	- I can identify 3D shapes, including cubes and cuboids, from 2D representations. - I can estimate and compare acute, obtuse and reflex angles. - I can identify missing angles by using my knowledge of angles on a straight line or at a point. - I can use the facts I know about polygons to find missing facts. - I can use angle sum facts and other properties to find missing values. I use the fact that an angle on a single point is a whole turn to find internal angles of common polygons. - I can use the properties of rectangles to deduce related facts and find missing lengths and angles.	**- I can identify 3D shapes, including cubes and cuboids, from 2D representations.** **- I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.** **- I can draw given angles and measure them in degrees** **- I can identify angles at a point and one whole turn (total 360°)** **- I can identify angles at a point on a straight line and 1/2 turn (total 180°)** **- I can identify other multiples of 90°.** **- I can use the properties of rectangles to deduce related facts and find missing lengths and angles.** **- I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles**
	Position and Direction	I can describe position using co-ordinates on a 2D-grid in the first quadrant after a translation to the left, right, up or down.	I can describe position using co-ordinates on a 2D grid in the first quadrant after a reflection in a horizontal or vertical line.	I can describe position using co-ordinates on a 2D grid in the first quadrant after a transation in two different directions (E.g. up and left)	**- I can identify, describe and represent the position of a shape following a reflection or translation, including the appropriate language, and know that the shape has not changed.**

Year 5	Step 16	Step 17	Step 18	End of year Expectations
Measurement	- I can convert and use fluently between units of length (mm, cm, m, km). - I can find the perimeter of a rectangle given the length and width. - I know and understand all metric units for measure - I am beginning to estimate volume.	- I can convert and use fluently between different units of metric measure including g and kg ;l and ml. - I can find the perimeter of a rectangle by using the formula 2l+2b using standard units - I can use the formula L x B to find the area of square/rectangle.. using standard units. - I know and understand all imperial units for measure - I can estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water). I can find efficient ways to calculate the perimeter of regular shapes.	- I can convert and use fluently between different units of metric measure (e.g. km and m; cm and m; cm and mm; g and kg; l and ml). - I can measure and calculate the perimeter of a composite rectilinear figure (including squares) in centimetres and metres. - I can measure and calculate the area of a composite rectilinear figure (including squares) in centimetres and metres. - I can understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. I can use algebraic expressions to represent missing measure problems. (e.g. 4 + 2b = 20, for a rectangle of side 2 and perimeter 20)	**- I can convert between different units of metric measure (e.g. km and m; cm and m; cm and mm; g and kg; l and ml).** **- I can measure and calculate the perimeter and area of composite rectilinear shapes in cm and m.** **- I can understand and use equivalences between metric units and common imperial units such as inches, pounds and pints.** **- I can calculate and compare the area of squares and rectangles including using standard units cm2 and m2 and estimate the area of irregular shapes.** **- I can estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water).**
Statistics	I can begin to choose which graphical representation to use with a set of continuous or discrete data. - I am beginning to read and interpret data from time tables. I know the vertical axis is referred to as the y axis and the horizontal axis is referred to as the x axis. I can read data between marked scales on continuous graphs. - I can interpret and present discrete and continuous data using appropriate graphical methods.	I can plot data on a line graph and join the plots to find further (x,y) values.	- I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and line graphs . - I can complete, read and interpret information in tables, including time tables. I can use line graphs to solve simple conversions problems. E.g. Km – m or hours to minutes.	**- I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and line graphs .** **.** **- I can complete, read and interpret information in tables, including time tables.**

Year 6		Step 19	Step 20	Step 21	End of year Expectations
Using and Applying	**Problem Solving**	**- I can solve number problems and practical problems involving a range of ideas** **- I can solve number problems and practical problems involving negative numbers** **- I can solve problems which require the knowing percentage and decimal equivalents of 1/2, '/4, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25.** **- I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.** **- I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.** **- I can use written division methods in cases where the answer has up to 2 decimal places solve problems which require answers to be rounded to specified degrees of accuracy.** **- I can use my knowledge of the order of operations to carry out calculations involving the 4 operations.** **- I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate.** **- I can solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts.** **- I can solve problems involving similar shapes where the scale factor is known or can be found.** **- I can solve problems involving the calculation of percentages (for example, of measures such as 15% of 360) and the use of percentages for comparison** **- I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.**			
Number	**Place Value**	- I can read, write, order and compare numbers up to 10 000 000 and determine the value of each digit - I can round any number up to 10 000 000 to the nearest 10, 100 and 1000 - I can recognise negative numbers, continue negative number sequences and find missing numbers	- I can read, write, order and compare numbers up to 1,000,000 and determine the value of each digit - I can round any number up to 10 000 000 to the nearest 10 000, 100 000 and 1 000 000 - I can put negative numbers onto a number line I am beginning to solve solve sum and difference problems involving negative numbers using concrete resources.	- I can read, write, order and compare numbers up to 10,000,000 and determine the value of each digit - I can choose to round any whole number up to the nearest 10, 100, 1000 and 10,000 depending on the required accuracy. - I can use negative numbers in context, and calculate intervals across 0. I can solve solve sum and difference problems involving negative numbers using concrete resources.	**- I can read, write, order and compare numbers up to 10,000,000 and determine the value of each digit** **- I can round any whole number to a required degree of accuracy.** **- I can use negative numbers in context, and calculate intervals across 0.**

Year 6		Step 19	Step 20	Step 21	End of year Expectations
	Fractions and Decimals	- I can add and subtract mixed numbers with the same denominator - I can multiply mixed numbers by a whole number - I can partition decimal numbers up to 3 decimal places and state the value of each digit. - I can associate a fraction with division by converting an integer and fraction to an improper fraction. - I can recall and use equivalences between simple fractions and decimals I can place fractions > 1 on a numberline	- I can compare and order mixed numbers whose denominators are multiplies of the same number - I can add and subtract fractions with the different denominators using the concept of equivalent fractions - I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams - I can multiply simple pairs of proper fractions. - I can divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. - I am beginning to divide proper fractions by whole numbers - I can read and write -decimal numbers as fractions and vice versa E.g. 73/100 = 0.73 - I can divide proper fractions by whole numbers using a visual representation I can use a numberline to compare fractions > 1. I am beginning to convert numbers < 1 to 2 d.p. to a proper fraction. (E.g. 0.26 = 26/100 = 13/50) - I can recall and use equivalences between simple fractions, decimals and percentages	- I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. - I can multiply simple pairs of proper fractions, writing the answer in its simplest form. - I can identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. - I can divide proper fractions by whole numbers - I can associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction. - I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	**- I can use common factors to simplify fractions; use common multiples to express fractions in the same denomination.** **- I can compare and order fractions, including fractions >1.** **- I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.** **- I can multiply simple pairs of proper fractions, writing the answer in its simplest form.** **- I can divide proper fractions by whole numbers.** **- I can associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction.** **- I can identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places.** **- I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.** **I can use written division methods in cases where the answer has up to two decimal places.**

Year 6		Step 19	Step 20	Step 21	End of year Expectations
Calculating	**Addition and Subtraction**	- I can consider whether to solve addition and subtraction calculations mentally or using a written method. I can explore order of operations (e.g. BODMAS) using brackets. - I can use rounding to check answers to calculations	- Add and subtract numbers mentally with increasingly large numbers. - I can use rounding to check. answers to calculations and determine, in the context of a problem and levels of accuracy	- Add and subtract numbers mentally with increasingly large numbers and mixed operations.. - I can use brackets and inverses effectively e.g. (24+P) x 6 = 150. - I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	**- I can perform mental calculations, including with mixed operations and large numbers.** **- I can use my knowledge of the order of operations to carry out calculations involving the 4 operations.** **- I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy**
	Multiplication and Division	-I can userecall of multiplication and division facts up to 12 x 12 to solve other multiplication and division calculations mentally. - I can use knowledge of times tables and place value to multiply 1s.t by 1s e.g. 0.6 x 4 = 2.4. - I can divide 3-digit numbers by 2-digit numbers using the formal method without remainders I can multiply 3-digit numbers x 2-digit numbers using long multiplication	- I can multiply larger numbers (<10,000) by single-digit numbers using short multiplication. - Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 1 and 0; dividing by 1; multiplying together three numbers. - I know multiples, factors, square numbers prime numbers - I can use brackets in simple calculations - I can use knowledge of times tables and place value to multiply TU.t by U e.g. 0.06 x 4 = 0.24. - I can divide 4-digit numbers by 2-digit numbers using the formal method with remainders I can multiply 4-digit numbers x 2 digit numbers using long multiplication. - I can divide ThHT1s by 1s where the remainder is recorded as a fraction.	- I can multiply numbers to 2 d.p. by a single-digit number using short multiplication. - I can identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. - I can use brackets and inverses effectively e.g. (24+P) x 6 = 150 - I can divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.	**- I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.** **- I can divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.** **- I can perform mental calculations, including with mixed operations and large numbers.** **- I can identify common factors, common multiples and prime numbers.** **- I can multiply one-digit numbers with up to 2 decimal places by whole numbers.**

Year 6		Step 19	Step 20	Step 21	End of year Expectations
Geometry	**Properties of shape**	- I can draw 2d shapes using dimensions and angles - I can compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes - I can illustrate and name parts of circles, including radius, diameter and circumference - I can identify acute and obtuse angles and compare and order angles by size	- I can recognise, describe and build simple 3-D shapes, including making nets. - I can compare and classify geometric shapes, including any quadrilaterals, regular polygons and triangles, based on their properties and sizes - I know that the diameter is twice the radius. - I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles (and right angles) I can use conventional markings for lines and angles in geometrical drawings and sketches.	- I can make 3d shapes using modelling materials; recognise 3d shapes in different orientations and describe them. - I can find unknown angles in any triangles, quadrilaterals, and regular polygons by representing the relationship algebraically. - I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. I can express the relationship between radius and diameter as d=2r or 2 x r I can describe position using co-ordinates in all 4 quadrants on a 2D grid in the first quadrant after a reflection in either the horizontal or vertical axes.	**- I can draw 2-D shapes using given dimensions and angles recognise, describe and build simple 3-D shapes, including making nets.** **- I can compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.** **- I can illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.** **- I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.**
	Position and direction	- I can draw positions of points in the first and second quadrants of a 2D co ordinate grid - I can identify, describe and represent the position of a shape following a reflection	- I can describe movements between positions as translations of a given unit to the left/right and up.down - I can identify, describe and represent the position of a shape following a translation,	- I can describe positions on a 2D grid as coordinates in the first quadrant - I can identify, describe and represent the position of a shape following a reflection or a translation, using the appropriate language, and know that the shape has not changed	**- I can describe positions on the full coordinate grid (all 4 quadrants).** **- I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.**

Year 6	Step 19	Step 20	Step 21	End of year Expectations
	- I can use, read, write and convert between standard units, converting measurements of length and mass, from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places. - I can convert between miles and kilometres. - I can recognise that shapes with the same areas can have different perimeters and vice versa. - I can calculate the area of triangles	- I can use, read, write and convert between standard units, converting measurements of volume from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places. - I can calculate volume of cubes and cuboids using standard units, - I can calculate the area of parallelograms	- I can use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places. - I can recognise when it is possible to use formulae for area and volume of shapes - I can relate the area of rectangles to triangles and parallelograms and calculate their areas, understanding and using formula - I can calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres (and extending to other units (for example, mm^3 and km^3).	**- I can use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places.** **- I can convert between miles and kilometres.** **- I can recognise that shapes with the same areas can have different perimeters and vice versa.** **- I can recognise when it is possible to use formulae for area and volume of shapes** **- I can calculate the area of parallelograms and triangles** **- I can calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres (and extending to other units (for example, mm^3 and km^3).**
Statistics	I can compare a set of data on a table with its representation on a pie-chart.	- I can interpret and present discrete and continuous data using appropriate graphical methods, including bar charts line graphs and pie charts - I can calculate the mean	- I can complete, read and interpret information in tables, including time tables I can convert discrete data to % and then convert to degrees to construct a pie chart for common % (E.g. 75%, 50%, 25%, 20%, 10%, 5%) - I can calculate and interpret the mean as an average	**- I can interpret and construct pie charts and line graphs and use these to solve problems.** **- I can calculate and interpret the mean as an average.**

Year 6	Step 19	Step 20	Step 21	End of year Expectations
Algebra	I can interpret problems using simple formulae. I can continue simple linear number sequences. I can express generalisations of a linear number sequence in words.	- I can use simple formulae to calculate answers - I can use inverses in number problems (e.g. I think of a number, double it and add five, the answer is 35. What is the original number) I can find pairs of numbers that satisfy an equation with 2 unknowns (E.g. a + b = 20) I can predict the nth term in a linear sequence. I can write equivalent expressions in algebraic form.	- I can use symbols and letters to represent an unknown number. - I can recognise negative numbers and continue positive negative number sequences and find missing numbers I can generate linear sequences to calculate solutions to a problem. I can express generalisations of a linear number sequence using algebraic expressions.	**- I can use simple formulae** **- I can express missing number problems algebraically.** **- I can find pairs of numbers that satisfy an equation with 2 unknowns** **- I can enumerate possibilities of combinations of 2 variables.** **- I can generate and describe linear number sequences.**
Ratio and Proportion	I can find simple percentages of quantities (e.g.10%, 25%, 50% and 75%) of quantities I can use concrete materials to solve simple ratio problems. I understand the relationship between common % (E.g. 25% and 50% or 10% and 5%)	- I can understand simple ratio and can solve problems involving direct proportion by scaling up/down. - I can find percentages (e.g. 30%, 60%) of quantities (multiples of 10) . I can use ratio tables or double numberline to solve unknowns in simple ratio problems. I can represent a ratio as a:b and read this as for every ‘a’ there is a ‘b’.	- I can reduce a ratio to its simplest form and use it in problem solving by multiplying (e.g. given the ingredients in a recipe for 5 people, calculate the quantities needed for 8) - I can calculate simple fractions and percentages of quantities (e.g. 3/8 of 980g, 15% of 360). I can partition % in to manageable units to calculate. (E.g. 15% of 360 is 10% of 360 + 5% of 360)	**- I can solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts.** **- I can solve problems involving similar shapes where the scale factor is known or can be found.** **- I can solve problems involving the calculation of percentages (for example, of measures such as 15% of 360) and the use of percentages for comparison** **- I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.**