







Ben Jonson Primary School

Maths Curriculum Map

		Audina d	A.,.t.,	Consider 4	Contract 2	C	6
		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
SEVES	Nursery	Number: Can say some number names in sequence. Joins in with finger rhymes with numbers. Notices change in amounts in a group up to 3 in songs and rhyme. Numerical Patterns: Notices patterns, e.g. stripes Starting to arrange objects in repeating patterns. Shape, Space and Measure: Uses words like big and little and starting to understand about grouping by size. Explores stacking and filling pots and cups. Can complete inset puzzles.	Number: Attempts to count in every day situations. Numerical Patterns: Starting to compare amounts using vocab lots, more and same. Anticipates what is happening next in a familiar routine. Shape, Space and Measure: Can climb and squeeze self into different spaces. Can sort a collection of objects such as the clothes from the washing or shells or buttons.	 Number: Develop fast recognition of up to 3 objects, without counting ('subitising'). Say one number for each item in order: 1,2,3,4,5 - Can count small sets saying one number name for each item using 1:1 correspondence. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Numerical Patterns: Knows the order of some key things that happen each day and what is coming next. Shape, Space and Measure: Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Notices shapes in the environment, like circles for road signs or spheres for balls. Understand position through words alone – for example, "The bag is under the table," – with no pointing. Can describe the position of things using words such as under and next to. 	Number: Show 'finger numbers' up to 5. Experiments with own symbols and marks to represent amounts. Link numerals and amounts: eg. showing the right number of objects to match the numeral, up to 5. Numerical Patterns: Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc. Shape, Space and Measure: Make comparisons between objects relating to size, length, weight and capacity. Compares size and weight with gesture and some language such as heavy, tall, short, small. Expressive Arts and Design: Play with different building materials like wooden bricks, Duplo, boxes, and mobilo and talks about what they are making.	 Number: Recite numbers past 5- Can count from 1-10 in the correct order. Recognises numerals 1-10 and can match the numeral to a group of things. Can estimate how many things there are and checks by counting. Compare quantities using language: 'more than', 'fewer than' Numerical Patterns: Extend and create ABAB patterns – e.g. stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern. Shape, Space and Measure: Beginning to use 2D and 3D shape names like "square", "triangle", cube" and "cylinder" and mathematical language like "corner", "side", "face" and "edge". Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind' Describes a route using spatial words such as under, behind, on or in when completing an obstacle course. 	 Number: Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Numerical Patterns: Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then'. Starts exploring the idea of 1 more and 1 fewer. Interest in pattern of numbers on a 100 square. Beginning to know the days of the week and when things happen. Shape, Space and Measure: Select shapes appropriately: flat surfaces for building, a triangular prism for a roof. Combine shapes to make new ones Make comparisons between objects relating to size, length, weight and capacity- Can say which object is heavy and which is light when holding 2 objects. Can say which bottle is full and which bottle is empty. Can use vocab related to length and height e.g. longer, shorter, or taller.

						Create closed shapes with continuous lines and begin to use these shapes to represent objects. Draw with increasing complexity and detail, such as representing a face with a circle and including details.
	Number:	Number:	Number:	Number:	Number:	Number:
Reception	 Match and sort- match pairs of a range of objects, sort objects into sets by their shape, or colour. Compare amounts- can identify which sets have more, fewer or are equal. Count objects, actions and sounds Measure, shape and spatial thinking: Key times of day- knows when it is time for the register, phonics, lunch, story time etc. Classroom routines- refers to visual timetable to know what is happening now and next, and engages in classroom routines such as sitting for story time, tidy up times. Positional language- understands key positional language, on top, under, next to. Compare size, mass and capacity- compare and order objects by size Compares heavy and light items. Understands full and empty. Use language of size- big and little, large and small, May use the language tall, long and short to compare. Continue, copy and create repeating patterns. 	 Representing 1,2 and 3 Makes own collections of 1,2 and 3 objects. Match number names to numerals and quantities up to 3. Counts up to 3 objects in different arrangements using 1:1 correspondence. Recognises that the last number they say is the cardinal number. Can subitise numbers to 3. Comparing 1,2, and 3- begins to understand as we count each number is one more than the number before. Begins to understand as we count back each number is one less than the previous number. Makes comparisons of numbers to 3 in their play. Composition of 1,2 and 3-understands that all numbers are made up of smaller numbers. Explores and notices the different compositions of 2 and 3. Representing numbers to 5-Can count forwards and backwards to 5, accurately using the counting principles. Subitise up to 5 objects. Count up to 5 objects to find out how many there are. 	 Introducing zero- Recognises that the number 0 means there is nothing there or something is all gone. Comparing numbers to 5-continues to understand when comparing quantities that one quantity can be one more, the same as or fewer than another quantity. Composition of 4 and 5-Explores and notices the different compositions of 4 and 5. Represents 6,7 and 8 in a variety of ways. Can count out a number of objects from a larger group. Combining 2 amounts- can combine 2 groups to find out how many there are altogether. Making pairs- knows that a pair is 2. Arranges small quantities in to pairs. Notices some quantities have an odd one out. Measure, shape and spatial thinking: Compare length, weight and capacity. Compare mass- make direct comparisons to compare heavy and light items. Can estimate which item feels heaviest and use a balance scale to check. 	 Counting to 9 and 10-represents 9 and 10 in different ways. Arranges 9 or 10 items in to small groups. Notices a 10 frame is full when there are 10 objects on it. Uses fingers to subitise 9 and 10. Comparing numbers to 10-continues to make comparisons by lining items up with 1:1 correspondence. Explore the composition of numbers to 10. Compares 2 quantities to 10. Starts to order 3 or more quantities. Automatically recalls number bonds for numbers 0-5 and some to 10. Bonds to 10- Explores number bonds to 10 using real objects. Measure, shape and spatial thinking: 3D shapes-explores and manipulates 3D shapes through block play. Explores which shapes stack and which shapes roll and why. Knows the names of some 3D shapes, e.g. cube, cuboid, cylinder, cone. 	 Count beyond 10. Building numbers beyond 10- Identifies numbers to 20. Recognises that numbers 1- 9 repeat after every full set of 10. Counting patterns beyond 10- counts on and back beyond 10. Can count on or back from different starting points. Adding more. Taking away- Uses real objects to see that the quantity of a group can be changed by taking items away. Can subitise small quantities Practises and consolidates counting on and back within 10. Continues noticing similarities and differences as they match and sort objects in new contexts. Continues comparing and ordering quantities and measures. Measure, shape and spatial thinking: Spatial reasoning- Can complete jigsaws and shape puzzles. 	 Doubling- Knows that double means twice as many. Use a range of objects to 'build' doubles e.g. 10 frames and dominoes. Sharing and grouping- Can share items equally. Recognises and makes equal groups. Can make suggestions for how they can resolve having an odd amount that cannot be shared equally. Even and odd- Begins to understand some quantities can be shared equally in to 2 groups and some won't. May notice some quantities can be grouped in to pairs and some will have one left over. Deepening understanding. Patterns and relationships-Explores and investigates relationships between numbers and shapes. Continues to copy, continue and create a widening range of repeating patterns and symmetrical constructions. Measure, shape and spatial thinking: Spatial reasoning- replicates simple constructions and models.

Uses coins in shop play and beginning to talk about

money.

	Exploring pattern- can copy, continue and create their own simple repeating patterns. Explore AB patterns in a range of contexts including shapes, colours, sizes, action and sounds. Communication and Language: Use vocabulary to explain what they notice when comparing classroom objects. Learn new vocabulary.	 Match number names to numerals and quantities up to 5. Represents up to 5 objects on a 5 frame. Understand the 'one more than/one less than' relationship between consecutive numbers. One more and one less- uses 5 frame and predicts how many there will be if they add one more or take one away. Measure, shape and spatial thinking: Circles and triangles- Knows a circle has one curved side and a triangle has 3 straight sides. Recognises circles and triangles in the environment, on everyday objects and items in the classroom and outdoors. Begin to use positional language to describe how items are positioned in relation to other items. Build journeys and obstacle courses, travelling through them. Knows that squares and rectangles have 4 sides and 4 corners. Recognises squares and rectangles in the environment, on everyday objects and items in the classroom and outdoors. Time- talks about night and day. Orders key events in their daily routines. Uses language to describe when events happen e.g. day, night, morning, afternoon, before after, today, tomorrow. Begins to measure time in simple ways e.g. counting the number of sleeps to an important event. 	 Uses vocabulary related to mass- heavy, heavier than, heaviest, light, lighter than, lightest. Understands that items that are bigger are not always heavier. Compare capacity- builds on understanding of full and empty by learning about half full, nearly full and nearly empty. Explores capacity using a range of resources- water, sand, rice and beans. Uses a range of different sized and shaped containers. Uses language tall, thin, narrow, wide and shallow. Length and height- Begins to use language to describe objects length and height. Uses specific mathematical vocabulary relating to length (longer, shorter). Uses specific mathematical vocabulary relating to height (taller, shorter). Uses specific mathematical vocabulary relating to breadth (wider, narrower). Time- continues to order and sequence important times in their day using language such as now, before, later, soon, after, then and next. Uses vocabulary yesterday, today and tomorrow. Can describe significant events in their life. Can talk about events they are looking forward to. 	 Explores similarities and differences between 3D shapes. Spatial awareness. Pattern- explores more complex patterns, using items more than once in each repeat, e.g. ABB, AAB, AABB, AABBB. 	 Can explain why they have chosen a particular shape and why a different shape would not fit. Fits shapes together and breaks shapes apart. Explores different shapes they can make by combining a set of given shapes. Select, rotate and manipulate shapes to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. 	 Can use positional language to describe where objects are in relation to other items. Visualise and build. Mapping- understands we can make maps and plans to represent places.
Year 1	Number: Number & Place Value (within 10)	Number: Number & Place Value (within 20)	Number: Addition & Subtraction (within 20)	Measurement: Length & Height Compare, describe and solve	Number: Multiplication & Division	Measurement: Money Recognise and know the value
	Count to ten, forwards and backwards, beginning with 0			practical problems for: lengths and heights for	Count in multiples of twos, fives and tens.	of different denominations of coins and notes.

- or 1, or from any given number.
- Count, read and write numbers to 10 in numerals.
- Given a number, identify one more or one less.

Number: Addition & Subtraction (within 10)

- Represent and use number bonds and related subtraction facts (within 10)
- Add and subtract one digit numbers (to 10), including zero.
- Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.
- Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems.

- Count to twenty, forwards and backwards, beginning with 0 or 1, from any given number.
- Count, read and write numbers from 1 to 20 in numerals.
- Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.

Geometry: Shape

 Recognise and name common 2D and 3D shapes, including rectangles, squares, circles and triangles, cubes, cuboids, pyramids and spheres.

- Represent and use number bonds and related subtraction facts within 20.
- Add and subtract one digit and two digit numbers to 20, including zero.
- Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.
- Solve one step problems that involve addition and subtraction.

Number: Number & Place Value (within 50)

- Count to 50 forwards and backwards, beginning with 0 or 1, or from any number.
- Count, read and write numbers from 1-50 in numerals.
- Identify and represent numbers using objects and pictorial representations.
- Count in 2's and 5's

- example, long/short, longer/shorter, tall/short, double/half Measure and begin to record lengths and heights.
- Measurement: Weight &

Volume

- Compare, describe and solve practical problems for mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
- Measure and begin to record mass/weight, capacity and volume.

 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.

Number: Fractions

- Recognise, find and name a half as one of two equal parts of an object, shape or quantity.
- Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

Geometry: Position & Direction

 Describe position, direction and movement, including whole, half, quarter and three-quarter turns.

Number: Number & Place Value (with 100)

- Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.
- Read and write numbers from 1 to 20 in words.
- Count, read and write numbers from 1-100 in numerals.
- Read and write numbers from 1 to 20 in numerals and words.
- Count in multiples of 2's, 5's and 10's.
- Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least.

 Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems.

Measurement: Time

- Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.
- Recognise and use language relating to dates, including days of the week, weeks, months and years.
- Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.

Year 2

Number: Number & Place Value

- Count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward.
- Recognise the place value of each digit in a two digit number (tens, ones)

Number: Addition & Subtraction

 Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their

Measurement: Money

- Recognise and use symbols of pounds (£) and pence (p); combine amounts to make a particular value.
- Find different combinations of coins that equal the same amounts of money.

Measurement: Length & Height

- Estimate and measure length/height in any direction (m/cm) using rulers.
- Compare and order lengths using >, < and =

Number: Fractions

- Recognise, find, name and write fractions ¹/₃, ¹/₄, ²/₄, and ³/₄ of a length, shape, set of objects or quantity.
- Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and

Statistics

- Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.
- Ask and answer simple questions by counting the number of objects in each

- Identify, represent and estimate numbers to 100 using different representations including the number line.
- Compare and order numbers from 0 up to 100; use <, > and = signs.
- Read and write numbers to at least 100 in numerals and words.
- Use place value and number facts to solve problems.

Number: Addition & Subtraction

- Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one digit numbers.

- increasing knowledge of metal and written methods.
- Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.
- Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

Geometry: Properties of Shapes

- Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line.
- Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces.
- Identify 2D shapes on the surface of 3D shapes
- Compare and sort common 2D and 3D shapes and everyday objects.

Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

Number: Multiplication & Division

- Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.
- Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.
- Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.
- Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.
- Multiply and divide by 2/5/10

Measurement: Mass, Capacity & Temperature

- Choose and use appropriate standard units to estimate and measure capacity (litres/ml) and temperature (°C) to the nearest appropriate unit, using thermometers and measuring vessels.
- Choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit, using scales.
- Compare and order mass and volume/capacity using >, < and =

- recognise the equivalence of $\frac{2}{1}$ and $\frac{1}{2}$.
- Count in fractions.

Measurement: Time

- 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.
- Know the number of minutes in an hour & the number of hours in a day.
- Compare and sequence intervals of time.

- category and sorting the categories by quantity.
- Ask and answer questions about totalling and comparing categorical data.

Geometry: Position & Direction

- Order and arrange combinations of mathematical objects in patterns and sequences.
- Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise).

Year 3

Number: Number & Place Value

- Count from 0 in multiples of 4, 8, 50 and 100.
- Find 10 or 100 more or less than a given number.
- Recognise the place value of each digit in a three digit number (hundreds, tens, ones).
- Compare and order numbers up to 1000.
- Identify, represent and estimate numbers using different representations.
- Read and write numbers up to 1000 in numerals and in words.
- Solve number problems and practical problems involving these ideas.

Number: Addition & Subtraction

Number: Multiplication & Division

- Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.
- Calculate mathematical statements for multiplication and division using the multiplication tables that they know including for two-digit numbers times one-digit numbers using the multiplication (x), division (÷) and equals (=) signs.
- Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context.
- Show that multiplication of two numbers can be done in any order (commutative) and

Number: Multiplication & Division

- Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.
- Solve problems including missing number problems involving multiplication and division, positive integer scaling problems.
- Write and calculate
 mathematical statements for
 multiplication and division
 using the multiplication tables
 they know, including for twodigit numbers times one-digit
 numbers, using mental
 methods and progressing to
 formal written methods.
 Divide 2 digits by 1 digit
- Measurement: Lengths &

Perimeter

Number: Fractions

- Recognise simple fractions (quarter, half, third)
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
- Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.
- Count in fractions
- 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.
- Equivalent fractions

Measurement: Mass & Capacity

Number: Fractions

- Recognise and show, using diagrams, equivalent fractions with small denominators.
- Add and subtract fractions with the same denominator within one whole $(\frac{5}{7} + \frac{1}{7} = \frac{6}{7})$
 - Compare and order unit fractions, and fractions with
- the same denominators.Solve problems that involve all of the above.

Measurement: Money

- Add & subtract amounts of money.
- Workout change.
- Use £ and p in practical contexts.
- Record pounds and pence separately.

Geometry: Properties of Shapes

- Recognise angles as a property of shape or a description of a turn.
- Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.
- Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
- Draw 2-D shapes and make 3D shapes using modelling materials.
- Recognise 3-D shapes in different orientations and describe them.

	 Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds. Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. Estimate the answer to a calculation and use inverse operations to check answers. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. 	division of one number by another cannot.	Measure, compare, add and subtract lengths(m/cm/mm) Measure the perimeter of simple 2-D shapes.	Measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml). Continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed units (for example, 1kg and 200g) and simple equivalents of mixed units (5m = 500cm).	Continue to be fluent in recognising the value of coins. Convert pounds and pence. Measurement: Time Tell and write the time from an analogue clock, including using Roman numerals from I to XII, 12-hour and 24-hour clocks. 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, am/pm, morning, afternoon, noon and midnight. Know the number of seconds in a minute and the number of days in each month, year and leap year. Compare durations of events [for example calculate the time taken by particular events or tasks].	Statistics Interpret and present data using bar charts, pictograms and tables. 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. Pupils understand and use simple scales (for example, 2, 5, 10 units per cm) in pictograms and bar charts with increasing accuracy.
Year 4	Number: Number & Place Value Count in multiples of 6, 7, 9,	Measurement: Area • Find the area of rectilinear	Number: Multiplication & Division • Multiply and divide by 10	Number: Fractions Recognise and show, using	Number: Decimals Round decimals with one	Geometry: Properties of Shapes • Identify acute and obtuse
	 25 and 1000. Find 1000 more or less than a given number. Count backwards through zero to include negative numbers. Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones). Order and compare numbers beyond 1000. Identify, represent and estimate numbers using different representations. Round any number to the nearest 10, 100 or 1000. Solve number and practical problems that involve all of the above and with increasingly large positive numbers. Read Roman numerals to 100 (I to C) and know that over time, the numeral 	shapes by counting squares. Relate area to arrays and multiplication. Number: Multiplication & Division Recall and use multiplication and division facts for multiplication tables up to 12 x 12. Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs and commutatively in mental calculations. Multiply and divide by 3, 6,9,7,	 Multiply and divide by 100 Multiply two-digit and three-digit number using formal written layout. Factor pairs. 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. 11 and 12 times table. Measurement: Length & Perimeter Convert between different units of measure eg kilometre to metre. Measure and calculate the perimeter of a rectilinear figure (including squares) in cm and m. 	diagrams, families of common equivalent fractions. Add and subtract fractions with the same denominator. Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including nonunit fractions where the answer is a whole number. Number: Decimals Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Recognise and write decimal equivalents of any number of tenths or hundredths.	decimal place to the nearest whole number. Order and compare numbers with the same number of decimal places up to two decimal place. Solve simple measure and money problems involving fractions and decimals to two decimal places. Money Add & subtract amounts of money. Give change Four operations Estimate, compare and calculate different measures, including money in pounds and pence. Time Convert between different units of measure, e.g. hour to minute.	angles and compare and order angles up to two right angles by size. Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify lines of symmetry in 2D shapes presented in different orientations. Complete a simple symmetric figure with respect to a specific line of symmetry. Geometry: Position & Direction Describe positions on a 2-D grid as coordinates in the first quadrant. Describe movements between positions as translations of a given unit to the left/right and up/down.

	system changed to include the concept of zero and place value. Number: Addition & Subtraction Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. Estimate and use inverse operations to check answers to a calculation. Solve addition and subtraction two step problems in contexts, deciding which operations		 Estimate, compare and calculate different measures. Perimeter on a grid 	Recognise and write decimal equivalents to half, quarter and three quarters. Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths.	 Read, write & convert time between analogue and digital 12 and 24 hour clocks. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. 	Plot specified points and draw sides to complete a given polygon. Statistics Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.
Year 5	and methods to use and why. Number: Number & Place Value Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10 000 and 100 000 Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. Solve number problems and practical problems that involve all of the above. Number: Addition & Subtraction Add and subtract numbers mentally with increasingly large numbers. Add and subtract whole numbers with more than 4 digits including using formal	Number: Multiplication & Division Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers. Establish whether a number up to 100 is prime and recall prime numbers up to 19. Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. Recognise and use square numbers and the notation for squared (2) and cubed (3) Number: Fractions Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical	Number: Multiplication & Division Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for two-digit numbers. Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. Number: Fractions Compare and order fractions whose denominators are multiples of the same number.	Number: Decimals & Percentages Read, write, order and compare numbers with up to three decimal places. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Round decimals with two decimal places to the nearest whole number and to one decimal place. Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. Solve problems which require knowing percentage and decimal equivalents of simple fractions with a denominator of a multiple of 10 or 25. Measurement: Perimeter & Area Measure and calculate the perimeter of composite rectilinear shapes in cm and m	 Geometry: Properties of shapes Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. Know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles. Draw given angles and measure them in degrees (°). Identify: angles at a point and one whole turn (total 360°) angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90°. Use the properties of rectangles to deduce related facts and find missing lengths and angles. Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Geometry: Position & Direction Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language and 	Number: Decimals Adding decimals Adding and subtracting decimals with a different number of decimal places Decimals and wholes Multiplying decimals by 10,100,1000 Solve problems involving number up to three decimal places. Measurement: Converting units Convert between different units of metric measure (for example, km and m; cm and m; cm and m; cm and mm; g and kg; l and ml). Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Solve problems involving converting between units of time. Measures: Volume Estimate volume (for example using 1cm3 blocks to build cuboids (including cubes) and capacity (for example, using water)
	digits, including using formal written methods (columnar addition and subtraction)	other and write mathematical statements.	 Multiples of the same number. Add and subtract fractions with the same denominator 	 Calculate and compare the area of rectangles (including 	appropriate language, and know that the shape has not changed.	water)). Use all four operations to solve problems involving

Year 6	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve addition and subtraction mult-istep problems in contexts, deciding which operations and methods to use and why. Number: Number & Place Value Read, write, order and	Complete, read and interpret information in tables, including timetables. Solve comparison, sum and difference problems using information presented in a line graph. Number: Fractions Use common factors to	and denominators that are multiples of the same number. • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. • Read and write decimal numbers as fractions. Number: Fractions, Decimals & Percentages	squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes. Measurement: Perimeter, Area & Volume	Draw on a grid Geometry: Properties of Shapes Draw 2D shapes using given	measure (eg. Length, mass, volume, money, money) using decimal notation, including scaling. Post SATS consolidation
	compare numbers up to 10 000 000 and determine the value of each digit. Round any whole number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero. Solve number and practical problems that involve all of the above Number: Addition & Subtraction, Multiplication & Division Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. Multiply multi-digit number up to 4 digits by a two-digit whole number using the formal written method of long multiplication. 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. Divide numbers up to 4 digits by a two-digit number using the formal written method of slong division where appropriate, interpreting remainders according to the context.	simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions > 1 Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form. Divide proper fractions by whole numbers Measurement: Using Measures Convert between miles and kilometres Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate 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 three decimal places.	 Identify the value of each digit in numbers given to three decimal places and multiply numbers by 10, 100 and 1000 giving answers up to 3 decimal places. Multiply one-digit numbers with up to two decimal place by whole numbers. Associate a fraction with division and calculate decimal fraction equivalents (eg. 0.375) for a simple fraction (eg. ³/₈). Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts Use written division methods in cases where the answer has up to two decimal places. Solve problems which require answers to be rounded to specified degrees of accuracy. Solve problems involving the calculation of percentages [for example, of measures such as 15% of 360] and the use of percentages for comparison Number: Algebra Use simple formulae. Generate and describe linear number sequences. Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables. 	 Recognise that shapes with the same areas can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume of shapes. Calculate the area of parallelograms and triangles. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm3, m3 and extending to other units (mm3, km3). Number: Ratio and proportion Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. Solve problems involving similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison. Statistics Interpret and construct pie charts and line graphs and use these to solve problems. 	dimensions and angles. Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Geometry: Position & Direction Describe positions on the full coordinate grid (all four quadrants). Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	

Perform mental calculations,		Calculate and interpret the	
including with mixed		mean as an average.	
operations and large			
numbers.			
 Identify common factors, 			
common multiples and			
prime numbers.			
 Use their knowledge of the 			
order of operations to carry			
out calculations involving			
the four operations.			
 Solve problems involving 			
addition, subtraction,			
multiplication and division.			
Use estimation to check			
answers to calculations and			
determine, in the context of			
a problem, an appropriate			
degree of accuracy.			