Thomas Buxton Primary School

Maths
Curriculum Map

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
EYFS	**RANGE 4** **Comparison** Beginning to compare and recognise changes in numbers of things, using words like more, lots or 'same' Counting Begins to say numbers in order, some of which are in the right order (ordinality) Cardinality (How many?) In everyday situations, takes or gives two or three objects from a group Beginning to notice numerals (number symbols) Beginning to count on their fingers **Spatial Awareness** Moves their bodies and toys around objects and explores fitting into spaces • Begins to remember their way around familiar environments Responds to some spatial and positional language Explores how things look from different viewpoints including things that are near or far away **Shape** Chooses puzzle pieces and tries to fit them in Recognises that two objects have the same shape Makes simple construction **Pattern** Joins in and anticipates repeated sound and action patterns Is interested in what happens next using the pattern of everyday routines **Measures** Explores differences in size, length, weight and capacity Beginning to understand some talk about immediate past and future Beginning to anticipate times of the day **RANGE 5** **Comparison** Compares two small groups of up to five objects, saying when there are the same number of objects in each group, e.g. You've got two, I've got two. Same! Counting May enjoy counting verbally as far as they can go Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5. Uses some number names and number language within play, and may show fascination with large numbers Begin to recognise numerals to 10 **Cardinality** Subitises one, two and three objects (without counting) Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle)					

	Links numerals with amounts up to 5 and maybe beyond Explores using a range of their own marks and signs to which they ascribe mathematical meanings Composition Through play and exploration, beginning to learn that numbers are made up of smaller numbers Beginning to use understanding of number to solve practical problems in play and meaningful activities Beginning to recognise that each counting number is one more than the one before Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same **Spatial Awareness** Responds to and uses language of position and direction Predicts, moves and rotates objects to fit the space or create the shape they would like **Shape** Chooses items based on their shape which are appropriate for the child's purpose Responds to both informal language and common shape names Shows awareness of shape similarities and differences between objects Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes Attempts to create arches and enclosures when building, using trial and improvement to select blocks **Pattern** Creates their own spatial patterns showing some organisation or regularity Explores and adds to simple linear patterns of two or three repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC) Joins in with simple patterns in sounds, objects, games and stories dance and movement, predicting what comes next **Measures** In meaningful contexts, finds the longer or shorter, heavier or lighter and more/less full of two items Recalls a sequence of events in everyday life and stories **RANGE 6** **Comparison** Uses number names and symbols when comparing numbers, showing interest in large numbers Estimates of numbers of things, showing understanding of relative size Counting Enjoys reciting numbers from 0 to 10 (and beyond) and back from 10 to 0 Increasingly confident at putting numerals in order 0 to 10 (ordinality) **Cardinality** Engages in subitising numbers to four and maybe five Counts out up to 10 objects from a larger group Matches the numeral with a group of items to show how many there are (up to 10) **Composition**

	Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three • In practical activities, adds one and subtracts one with numbers to 10 Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and '+ or '-' **Spatial Awareness** Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints Investigates turning and flipping objects in order to make shapes fit and create models; predicting and visualising how they will look (spatial reasoning) May enjoy making simple maps of familiar and imaginative environments, with landmarks **Shape** Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes Uses own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build **Pattern** Spots patterns in the environment, beginning to identify the pattern "rule" Chooses familiar objects to create and recreate repeating patterns beyond AB patterns and begins to identify the unit of repeat **Measures** Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy Becomes familiar with measuring tools in everyday experiences and play Is increasingly able to order and sequence events using everyday language related to time Beginning to experience measuring time with timers and calendars **<u>Early Learning Goals</u>** **Number** Children at the expected level of development will Have a deep understanding of number to 10, including the composition of each number; 14 Subitise (recognise quantities without counting) up to 5 Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. **Numerical Patterns** Children at the expected level of development will Verbally count beyond 20, recognising the pattern of the counting system Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

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	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
YEAR 1	**Number: Place Value (within 10)** Count to 10, forwards and backwards, beginning with 0 or 1, or from any given number Count, read and write numbers to 10 in numerals and words Given a number, identify one more and one less Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least **Number: Addition and Subtraction (within 10)** Represent and use number bonds and related subtraction facts within 10 Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equal (=) signs	**Geometry: Shape** Recognise and name common 2-D shapes, including: rectangles (including squares), circles and triangles Recognise and name common 3-D shapes including: cuboids (including cubes), pyramids and spheres **Number: Place Value (within 20)** Count to 20, forwards and backwards, beginning with 0 or 1, or from any given number Count, read and write numbers to 20 in numerals and words Given a number, identify one more and one less Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	**Measurement: Time (taught daily)** Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening) Recognise and use language relating to dates, including days of the week, weeks, months and years Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] Measure and begin to record time (hours, minutes, seconds) **Number: Addition and Subtraction (within 20)** Represent and use number bonds and related subtraction facts within 20 Read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs	**Number: Place Value (within 50) Including multiples of 2, 5 and 10** Count to 50 forwards and backwards, beginning with 0 or 1, or from any number Count, read and write numbers to 50 in numerals. Given a number, identify one more or one less Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least Count in multiples of twos, fives and tens **Measurement: Length and Height (also taught in Science)** Measure and begin to record lengths and heights Describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)	**Measurement: Time (taught daily)** Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening) Recognise and use language relating to dates, including days of the week, weeks, months and years Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] Measure and begin to record time (hours, minutes, seconds) **Measurement: Money** Recognise and know the value of different denominations of coins and notes **Number: Fractions repeat** Recognise, find and name a half as one of two equal parts	**Number: Place Value (within 100)** Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number Count, read and write numbers to 100 in numerals Given a number, identify one more and one less Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least **Geometry: Shape Repeat** Recognise and name common 2-D shapes, including: rectangles (including squares), circles and triangles Recognise and name common 3-D shapes including: cuboids (including cubes), pyramids and spheres

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	Add and subtract one digit numbers to 10, including 0 Solve one step problems that involve addition and subtraction using concrete objects and pictorial representations and missing number problems	**Measurement: Money** Recognise and know the value of different denominations of coins and notes **Number: Addition and Subtraction (within 10) Repeat** Represent and use number bonds and related subtraction facts within 10 Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equal (=) signs Add and subtract one digit numbers to 10, including 0 Solve one step problems that involve addition and subtraction using concrete objects and pictorial representations and missing number problems **Number: Multiplication and Division (Including multiples of 2, 5 and 10)** Count in multiples of twos, fives and tens. Solve one step problems involving multiplication and division, by calculating the answer using concrete	Add and subtract one-digit and two-digit numbers to 20, including zero Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9 **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. *Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) 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]*	**Number: Multiplication and Division (Including multiples of 2, 5 and 10)** Count in multiples of twos, fives and tens. 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. *Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) 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]*	of an object, shape or quantity Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. *Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) 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]* **Measurement: Weight and Volume (also taught in Science)** Measure and begin to record mass/weight, capacity and 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] **Number: Multiplication and Division (Including multiples of 2, 5 and 10) Repeat**	**Measurement: Length and Height Repeat** Measure and begin to record lengths and heights Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) **Measurement: Weight and Volume (also taught in Science) Repeat** Measure and begin to record mass/weight, capacity and 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] **Number: Fractions Repeat** Recognise, find and name a half as one of two equal parts of an object, shape or quantity

		objects, pictorial representations and arrays with the support of the teacher	**Number: Place Value (within 50) Including multiples of 2, 5 and 10** Count to 50 forwards and backwards, beginning with 0 or 1, or from any number Count, read and write numbers to 50 in numerals Given a number, identify one more or one less Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least Count in multiples of twos, fives and tens	**Number: Addition and Subtraction (within 20) Repeat** Represent and use number bonds and related subtraction facts within 20 Read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs Add and subtract one-digit and two-digit numbers to 20, including zero Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ☐ – 9 **Geometry: Position and Direction** Describe position, direction and movement, including whole, half, quarter and three quarter turns	Count in multiples of twos, fives and tens. 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: Place Value (within 50) Including multiples of 2, 5 and 10 Repeat** Count to 50 forwards and backwards, beginning with 0 or 1, or from ny number Count, read and write numbers to 50 in numerals. Given a number, identify one more or one less Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least Count in multiples of twos, fives and tens	Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. *Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) 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]*

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Objectives taught in other curriculum areas	**Measurement: Time (taught in basic skills)** Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening) Recognise and use language relating to dates, including days of the week, weeks, months and years Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] Measure and begin to record time (hours, minutes, seconds) **Measurement: Money (taught in basic skills)** Recognise and know the value of different denominations of coins and notes

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
YEAR 2	**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) Identify, represent and estimate numbers using different representations, including the number line Compare and order numbers from 0 up to 100; use <, > and = signs	**Number: Addition and 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	**Measurement: Time (taught daily)** 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 and the number of hours in a day. Compare and sequence intervals of time. **Number: Place Value (repeat)** Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	**Geometry: Position and Direction** 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 anti-clockwise) Order and arrange combinations of mathematical objects in patterns and sequences	**TAF statement evidence gathering** **Number: Fractions repeat** Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	**TAF statement evidence gathering** **Measurement: Time (taught daily)** 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 and the number of hours in a day. Compare and sequence intervals of time. **Statistics repeat** Interpret and construct simple pictograms, tally

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	Read and write numbers to at least 100 in numerals and in words Use place value number facts to solve problems **Number: Addition and 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 Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot **EXS ITAF:** Add and subtract any two-digit numbers using an efficient strategy, explaining their method	• Two two-digit numbers • Adding three one-digit numbers Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot **EXS TAF:** Add and subtract any two-digit numbers using an efficient strategy, explaining their method verbally, in pictures or using apparatus (e.g. 48 + 35; 72 – 17) **EXS TAF:** Recall all number bonds to and within 10 and use these to reason with a calculate bonds to and within 20, recognising other associated additive relationships (e.g. if 7 + 3 = 109, then 17 + 3 = 20, if 7 – 3 = 4, then 17 – 3 = 14; leading to if 14 + 3 = 17, then 3 + 14 = 17, 17 – 14 = 3 and 17 – 3 = 14) **GD TAF:** Use reasoning about numbers and relationships to solve more complex problems and explain their thinking (e.g. 29 + 17 = 15 + 4 + ?; 'together Jack and Sam have £14. Jack has £2 more than Sam. How much money does Sam have?' etc.) **GD TAF:** Solve unfamiliar word problems that involve	Recognise the place value of each digit in a two-digit number (tens, ones) Read and write numbers to at least 100 in numerals and in words **Measurement: Length and Height (also taught in Science)** Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit, using rulers Compare and order lengths, mass, volume/capacity and record the results using >, < and = **EXS TAF:** Read scales in divisions of ones, twos, fives and tens (in the form of a number line of a practical measuring situation) **GD TAF:** Read scales where not all numbers on the scale are given and estimate points in between **Number: Division** Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	**Number: Fractions** Recognise, find, name and write fractions $\frac{1}{3}, \frac{1}{4}, \frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ **EXS TAF:** Identify $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{2}{4}$ and $\frac{3}{4}$ of a number or shape, and know that all parts must be equal parts of the whole **Measurement (also taught in Science)** Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels Compare and order lengths, mass, volume/capacity and record the results using >, < and = **EXS TAF:** Read scales in divisions of ones, twos, fives	**EXS TAF:** Identify $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{2}{4}$ and $\frac{3}{4}$ of a number or shape, and know that all parts must be equal parts of the whole **Measurement: Time (taught daily) repeat** 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 and the number of hours in a day. Compare and sequence intervals of time. **Measurement: Money repeat** Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value Find different combinations of coins that equal the same amounts of money Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change **Number: Addition and Subtraction (repeat)** Recall and use addition and subtraction facts to 20	charts, block diagrams and simple tables Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity Ask and answer questions about totalling and comparing categorical data **Number: Addition and Subtraction repeat** Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: • A two-digit number and ones • A two-digit number and tens • Two two-digit numbers • Adding three one-digit numbers Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot

	verbally, in pictures or using apparatus (e.g. 48 + 35; 72 – 17) **EXS TAF:** Recall all number bonds to and within 10 and use these to reason with a calculate bonds to and within 20, recognising other associated additive relationships (e.g. if 7 + 3 = 109, then 17 + 3 = 20, if 7 – 3 = 4, then 17 – 3 = 14; leading to if 14 + 3 = 17, then 3 + 14 = 17, 17 – 14 = 3 and 17 – 3 = 14) **GD TAF:** Use reasoning about numbers and relationships to solve more complex problems and explain their thinking (e.g. 29 + 17 = 15 + 4 + ?; 'together Jack and Sam have £14. Jack has £2 more than Sam. How much money does Sam have?' etc.) **GD TAF:** Solve unfamiliar word problems that involve more than one step (e.g. 'which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?')	more than one step (e.g. 'which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?') **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 category and sorting the categories by quantity Ask and answer questions about totalling and comparing categorical data **Number: Multiplication** Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication	Calculate mathematical statements for multiplication and division within the multiplication tables and write them 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 contexts Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot **EXS TAF:** Recall multiplication and division facts for 2, 5 and 10 and use them to solve simple problems, demonstrating an understanding of commutativity as necessary **GD TAF:** Recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts **Number: Fractions** Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity	and tens (in the form of a number line of a practical measuring situation) **GD TAF:** Read scales where not all numbers on the scale are given and estimate points in between **Number: Addition and Subtraction (repeat)** 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 t addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot **Multiplication (repeat)**	fluently, and derive and use related facts up to 100 Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: • A two-digit number and ones • A two-digit number and tens • Two two-digit numbers • Adding three one-digit numbers Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot **Multiplication and Division (repeat)** Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs	

		and division facts, including problems in contexts Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot **EXS TAF:** Recall multiplication and division facts for 2, 5 and 10 and use them to solve simple problems, demonstrating an understanding of commutativity as necessary **GD TAF:** Recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts **<u>Measurement: Money</u>** Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value Find different combinations of coins that equal the same amounts of money Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change **<u>Geometry: Properties of Shapes</u>** Identify and describe the properties of 2-D shapes,	Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ **EXS TAF:** Identify $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a number or shape, and know that all parts must be equal parts of the whole	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (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 contexts Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot **Number: <u>Division</u> (repeat)** Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	

		including the number of sides and line symmetry in a vertical line Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces Identify 2-D shapes on the surface of 3-D shapes (for example, a circle on a cylinder face and a triangle on a pyramid) Compare and sort common 2-D shapes and 3-D shapes and everyday objects **EXS TAF:** Name and describe properties of 2-D and 3-D shapes, including number of sides, vertices, edges, faces and lines of symmetry **GD TAF:** Describe similarities and differences of 2-D and 3-D shapes, using their properties (e.g. that two different 2-D shapes both have only one line symmetry; that a cube and a cuboid have the same number of edges, faces and vertices, but different dimensions).		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 contexts Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot **Geometry: Properties of Shapes repeat** Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces Identify 2-D shapes on the surface of 3-D shapes (for example, a circle on a cylinder face and a triangle on a pyramid) Compare and sort common 2-D shapes and 3-D shapes and everyday objects		

				EXS TAF: Name and describe properties of 2-D and 3-D shapes, including number of sides, vertices, edges, faces and lines of symmetry **GD TAF:** Describe similarities and differences of 2-D and 3-D shapes, using their properties (e.g. that two different 2-D shapes both have only one line symmetry; that a cube and a cuboid have the same number of edges, faces and vertices, but different dimensions).		

Objectives taught in other curriculum areas	**Measurement: Money (taught in Basic Skills)** Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value Find different combinations of coins that equal the same amounts of money Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change **Measurement: Time (taught daily)** 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 and the number of hours in a day. Compare and sequence intervals of time.

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	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
YEAR 3	**Number: Place Value within 1000** 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 number up to 1000 in numerals and in words Solve number problems and practical problems involving these ideas **Number: Addition and Subtraction** Add and subtract mentally, including: • A three-digit number and ones • A three-digit number and tens	**Number: Addition and Subtraction repeat** Add and subtract 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 **Number: Multiplication and Division** Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	**Measurement: Time** Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clock. 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 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 to calculate the time taken by particular events or tasks] **Number: Addition and Subtraction repeat** Add and subtract mentally, including: • A three-digit number and ones • A three-digit number and tens	**Geometry: Properties of Shape repeat** 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 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them **Number: Addition and Subtraction (repeat)** Add and subtract mentally, including: • A three-digit number and ones • A three-digit number and tens	**Number: Fractions (repeat)** 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 Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Recognise and show, using diagrams, equivalent fractions with small denominators Compare and order unit fractions, and fractions with the same denominator Add and subtract fractions with the same denominator within one whole (for example $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$) Solve problems that involve all of the above	**Geometry: Properties of Shape (repeat)** 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 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them **Statistics repeat** 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

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	• 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 **Geometry: Properties of Shape** 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.	Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems, and correspondence problems in which n objects are connected to m objects **Measurement: Money** Add and subtract amounts of money to give change, using both £ and p in practical contexts **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	• 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 **Number: 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 Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	• 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 **Number: Multiplication and Division (repeat)** Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods Solve problems, including missing number problems, involving multiplication and	**Number: Place Value within 1000 (repeat)** 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 number up to 1000 in numerals and in words Solve number problems and practical problems involving these ideas **Measurement: Length and Perimeter repeat** Measure the perimeter of simple 2-D shapes	presented in scaled bar charts and pictograms and tables **Number: Fractions (repeat)** 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 Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Solve problems that involve all of the above Recognise and show, using diagrams, equivalent fractions with small denominators Compare and order unit fractions, and fractions with the same denominator Add and subtract fractions with the same denominator within one whole (for example $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$) Solve problems that involve all of the above

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	Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	**Measurement: Length and Perimeter** Measure the perimeter of simple 2-D shapes **Number: Place Value within 1000 (repeat)** 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 number up to 1000 in numerals and in words Solve number problems and practical problems involving these ideas	Solve problems that involve all of the above Recognise and show, using diagrams, equivalent fractions with small denominators Compare and order unit fractions, and fractions with the same denominator Add and subtract fractions with the same denominator within one whole (for example $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$) Solve problems that involve all of the above **Geometry: Properties of Shape repeat** 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 3-D shapes using modelling materials; recognise 3-D	division, including positive integer scaling problems, and correspondence problems in which n objects are connected to m objects **Number: Fractions (repeat)** 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 Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Solve problems that involve all of the above Recognise and show, using diagrams, equivalent fractions with small denominators Compare and order unit fractions, and fractions with the same denominator Add and subtract fractions with the same denominator within one whole (for example $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$)		**Number: Multiplication and Division (repeat)** Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems, and correspondence problems in which n objects are connected to m objects

			shapes in different orientations and describe them **<u>Number:</u>** Multiplication **<u>and Division repeat</u>** Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems, and correspondence problems in which n objects are connected to m objects	Solve problems that involve all of the above		
Objectives taught in other curriculum areas	**<u>Measurement: Money (taught in Basic Skills)</u>** Add and subtract amounts of money to give change, using both £ and p in practical contexts **<u>Measurement: Time (taught in Basic Skills)</u>** Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clock. 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					

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	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 to calculate the time taken by particular events or tasks] **Measurement: Mass and Capacity (taught in Science)** Measure, compare, add and subtract: length (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
YEAR 4	**Number: Place Value** Count in multiples of 6, 7, 9, **25 and 1000** (6, 7, 9 to be covered in Multiplication and Division Autumn 2) 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)	**Number: Multiplication and Division** Recall 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 commutativity in mental calculations.	**Geometry: Properties of Shape** Identify acute and obtuse 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 2-D shapes presented in different orientations	**Number: Decimals** Recognise and write decimal equivalents of any number of tenths or hundredths 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 Solve simple measure and money problems involving fractions and decimals to two decimal places Compare numbers with the same number of decimal	**Statistics repeat** 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 **Geometry: Properties of Shape repeat** Identify acute and obtuse angles and compare and order angles up to two right angles by size	**Number: Addition and Subtraction (repeat)** 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,

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	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 system changed to include the concept of zero and place value **Number: Addition and 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,	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. 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 connected to m objects **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 **Measurement: Money (taught in Basic Skills)** Estimate, compare and calculate different measures, including money in pounds and pence Solve simple measure and money problems involving fractions and decimals to two decimal places	Complete a simple symmetric figure with respect to a specific line of symmetry **Number: Fractions** Recognise and show, using diagrams, families of common equivalent fractions Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten 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 Add and subtract fractions with the same denominator **Measurement: Length and Perimeter** Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Convert between different units of measure (for example, kilometre to metre) **Measurement: Area**	places up to two decimal places Round decimals with one decimal place to the nearest whole number Recognise and write decimal equivalents to $\frac{1}{2}, \frac{1}{4}, \frac{3}{4}$ 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 **Measurement: Time (taughtin Basic Skills)** Read, write and convert time between analogue and digital 12and 24-hour clocks Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days **Geometry: Position and Direction** Describe positions on a 2-D grid as coordinates in the first quadrant Plot specified points and draw sides to complete a given polygon Describe movements between positions as	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes Identify lines of symmetry in 2-D shapes presented in different orientations Complete a simple symmetric figure with respect to a specific line of symmetry **Geometry: Position and Direction** Describe positions on a 2-D grid as coordinates in the first quadrant Plot specified points and draw sides to complete a given polygon Describe movements between positions as translations of a given unit to the left/ right and up/ down **Number: Addition and Subtraction repeat** Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	deciding which operations and methods to use and why **Number: Fractions (repeat)** Recognise and show, using diagrams, families of common equivalent fractions. Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. 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 Add and subtract fractions with the same denominator. **Geometry: Properties of Shape (repeat)** Identify acute and obtuse 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

	deciding which operations and methods to use and why		Find the area of rectilinear shapes by counting squares **<u>Number: Place Value (repeat)</u>** Count in multiples of 6, 7, 9, **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 system changed to include the	translations of a given unit to the left/ right and up/ down **<u>Number: Multiplication and Division (repeat)</u>** Recall 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 commutativity in mental calculations. Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. 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 connected to m objects	Estimate and use inverse operations to check answers to a calculation Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why **<u>Number: Place Value repeat</u>** Count in multiples of 6, 7, 9, **25 and 1000** (6, 7, 9 to be covered in Multiplication and Division Autumn 2) 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	Identify lines of symmetry in 2-D shapes presented in different orientations Complete a simple symmetric figure with respect to a specific line of symmetry **<u>Number: Decimals repeat</u>** Recognise and write decimal equivalents of any number of tenths or hundredths 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 Solve simple measure and money problems involving fractions and decimals to two decimal places Convert between different units of measure [for example, kilometre to metre] Compare numbers with the same number of decimal places up to two decimal places Round decimals with one decimal place to the nearest whole number

			concept of zero and place value		the above and with increasingly large positive numbers 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 **Number: Multiplication and Division (repeat)** Recall 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 commutativity in mental calculations. Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems	Recognise and write decimal equivalents to $\frac{1}{2}, \frac{1}{4}, \frac{3}{4}$ 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 **Measurement: Time repeat** Read, write and convert time between analogue and digital 12and 24-hour clocks Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days **Measurement: Money repeat** Estimate, compare and calculate different measures, including money in pounds and pence Solve simple measure and money problems involving fractions and decimals to two decimal places

					and harder correspondence problems such as n objects connected to m objects **Measurement: Length and Perimeter repeat** Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Convert between different units of measure (for example, kilometre to metre) **Measurement: Area repeat** Find the area of rectilinear shapes by counting squares	

Objectives taught in other curriculum areas	**Measurement: Time (taughtin Basic Skills)** Read, write and convert time between analogue and digital 12and 24-hour clocks Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days **Measurement: Money (taught in Basic Skills)** Estimate, compare and calculate different measures, including money in pounds and pence Solve simple measure and money problems involving fractions and decimals to two decimal places

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	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
YEAR 5	**Number: Place Value** Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit Count forwards and 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, 10000 and 100000 Solve number problems and practical problems that involve all of the above Read Roman numerals to 1000 (M) and recognise years written in Roman numerals **Number: Addition and Subtraction** Add and subtract whole numbers with more than 4 digits, including using formal	**Number: Multiplication and Division** Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Establish whether a number up to 100 is prime and recall prime numbers up to 19 Multiply and divide numbers mentally drawing upon known facts Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 **(also covered in decimals block- Summer 1)** Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	**Place Value (repeat)** Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit Count forwards and 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, 10000 and 100000 Solve number problems and practical problems that involve all of the above Read Roman numerals to 1000 (M) and recognise years written in Roman numerals **Number: Fractions** Compare and order fractions whose denominators are multiples of the same number Identify, name and write equivalent fractions of a given	**Statistics** Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables **Number: Multiplication and Division (repeat)** Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Establish whether a number up to 100 is prime and recall prime numbers up to 19 Multiply and divide numbers mentally drawing upon known facts Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 *(also covered in decimals block- Summer 1)*	**Number: Multiplication and Division (repeat)** Multiply and divide numbers mentally drawing upon known facts Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for 2-digit numbers Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign **Number: Decimals** Solve problems involving number up to three decimal places Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	**Place Value (repeat)** Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit Count forwards and 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, 10000 and 100000 Solve number problems and practical problems that involve all of the above Read Roman numerals to 1000 (M) and recognise years written in Roman numerals **Measurement (repeat)** Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres

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	written methods (columnar addition and subtraction) Add and subtract numbers mentally with increasingly large numbers Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	*Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates (covered in Fractions block Spring term)* **Number: Multiplication and Division** Multiply and divide numbers mentally drawing upon known facts Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for 2-digit numbers Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign **Measurement: Converting Units (taught in Science)** Convert between different units of metric measure [for example, km and m; cm and	fraction, represented visually including tenths and hundredths Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number (for example $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$) Add and subtract fractions with the same denominator 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 [for example 0.71 = $\frac{71}{100}$] Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates **Geometry: Position and Direction** Identify, describe and represent the position of a shape following a reflection or translation, using the	Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) 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 **Number: Decimals and 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 Solve problems involving number up to three decimal places *(also covered in next block)* Recognise the percent symbol (%) and understand that per	Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling **Geometry: Position and Direction repeat** Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed **Fractions (repeat)** 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 Solve problems involving number up to three decimal places Recognise the percent symbol (%) and understand that per	Calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes **Decimals (repeat)** Solve problems involving number up to three decimal places Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling **Geometry: Properties of Shape repeat** Identify 3D shapes, including cubes and other cuboids, from 2D representations 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

		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 **Decimals** Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling **Geometry: Properties of Shape** Identify 3D shapes, including cubes and other cuboids, from 2D representations 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 Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	appropriate language, and know that the shape has not changed **Measurement: Volume (taught in Science)** Estimate volume [for example using 1cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] Use all four operations to solve problems involving measure (for example: length, mass, volume, money) using decimal notation, including scaling) **Measurement: Perimeter and Area** Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes	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 $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 **Geometry: Properties of Shape repeat** Identify 3D shapes, including cubes and other cuboids, from 2D representations 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 Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees Identify:	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 $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator	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° **Number: Addition and Subtraction (repeat)** Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Add and subtract numbers mentally with increasingly large numbers Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

		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° **Number: Addition and Subtraction repeat** Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Add and subtract numbers mentally with increasingly large numbers Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why		• 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°		Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why **Number: Multiplication and Division (repeat)** Multiply and divide numbers mentally drawing upon known facts Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for 2-digit numbers Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign

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Objectives taught in other curriculum areas	**Measurement: Converting Units (also taught in Science)** Convert between different units of metric measure [for example, km 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 **Measurement: Volume (also taught in Science)** Estimate volume [for example using 1cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] Use all four operations to solve problems involving measure (for example: length, mass, volume, money) using decimal notation, including scaling)					
	AUTUMN 1	**AUTUMN 2**	**SPRING 1**	**SPRING 2**	**SUMMER 1**	**SUMMER 2**
YEAR 6	**Number: Place Value** Read, write, order and 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 and Division** Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	**Number: Addition, Subtraction, Multiplication and Division** Perform mental calculations, including with mixed 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 addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems involving addition, subtraction, multiplication and division **Number: Fractions**	**Geometry: Position and 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 **Statistics** Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius Interpret and construct pie charts and line graphs and use these to solve problems Calculate the mean as an average **Number: Decimals**	**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 **Measurement: Perimeter, Area and Volume** 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	**Revision using gap analysis from Mock SATs** **SATs week**	**Consolidation, Problem Solving and Investigation**

	Divide numbers up to 4 digits by a two-digit whole number <u>using the formal written method of long division</u>, and interpret remainders as whole number remainders, fractions or by rounding as appropriate to the context Divide numbers up to 4 digits by a two-digit number using the <u>formal written method of short division</u> where appropriate, interpreting remainders according to the context Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Use common factors to 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 denominators and mixed numbers, using the concept of equivalent fractions Multiply simple pairs of proper fractions, writing the answer in its simplest form (eg. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) Divide proper fractions by whole numbers (eg. $\frac{1}{3} \div 2 = \frac{1}{8}$) Associate a fraction with division and calculate decimal fraction equivalents (eg. $0.375 = \frac{3}{8}$) Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts **<u>Measurement: Converting Units</u>**	Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places Multiply 1-digit numbers with up to 2 decimal places by whole numbers 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 **<u>Number: Percentages</u>** Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison Recall and use equivalences between simple fractions, decimals and percentages including in different contexts	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) **<u>Number: Ratio</u>** 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 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 3 decimal places Convert between miles and kilometres **Geometry: Properties of Shape** Draw 2-D shapes using given dimensions and angles Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles				

		Recognise, describe and build simple 3-D shapes, including making nets				
Objectives taught in other curriculum areas						