KS1 National Curriculum	KS2 National Curriculum
• The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools]. • At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. • By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. • Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.	**Lower KS2** The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling. **Upper KS2** The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio. At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly.

Maths Curriculum Statement of Intent:

Mathematics is an important creative discipline that helps us to understand and change the world. We want all pupils at Featherstone Wood Primary School to experience the power and enjoyment of mathematics and develop a sense of curiosity about the subject with a clear understanding. We aim to foster positive can do attitudes and we promote the fact that 'We can all do maths!' We believe all children can achieve in mathematics, and teach for secure and deep understanding of mathematical concepts through manageable steps. We use mistakes and misconceptions as an essential part of learning and provide challenge through reasoning and problem solving. At our school, the majority of children will be taught the content from their year group only. They will spend time becoming true masters of content, applying and being creative with new knowledge in multiple ways.

We aim for all pupils to:

- become fluent in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- be able to solve problems by applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios
- reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.
- have an appreciation of number and number operations, which enables mental calculations and written procedures to be performed efficiently, fluently and accurately to be successful in mathematics.

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Long Term Planning Maths

National Curriculum Coverage

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	**LS1** : **Geometry** – Positional language including numbers **LS2 – 8**: **Numbers to ten**: Finding patterns in numbers, counting and comparison, estimating and ordering, regrouping the whole, part whole addition and subtraction, solving problems using part or whole unknown & comparison.	**LS 9**: **Numbers to ten** – equality and balance. **LS10 – 13**: **Numbers to twenty** – Making 10 and some more, estimating and ordering 1 more and 1 less, doubling and halving, odd and even numbers. **LS14**: **Geometry** – names and properties of 2D and 3D shapes.	**LS15: Measures** – The language of comparing length, height, mass and speed. **LS16: Sequencing events** – Days of the week and months of the year. **LS17-20: Numbers to 20** – Adding using 'think 10', Subtractions using 'think 10', equality and balance, part or whole unknown.	**LS21 & 22: Numbers to 20** – Language and problem solving, comparison including statistics. **LS23: Measures** – Coins and combinations of 20, ordering and comparing. **LS24**: Counting in 2's, 5's and 10's **LS25: Measures** – Non-standard measures and introducing standard measures.	**LS26: Multiplication and division** – equal or unequal groups and remainders. **LS27-29: Multiplication** – repeated addition and arrays, problem solving, scaling abd counting in 2's to 24. **LS30: Division** – sharing and grouping problems. **LS31: Time** – telling the time, o'clock and half past. **LS32: Fractions** – Sharing into equal groups.	**LS33 & 34: Fractions** – equal or unequal parts of shapes, continuous quantities including capacity. **LS35: Numbers to 20** – review. **LS36: Numbers to 100** – Place value and digits, making 10 and some more. **LS37: Place value** – Estimation, ordering and comparison. **Review and close the gap sessions.**
Year 2	**2LS1:** Securing fluency to 20. **2LS2: Place value** – making 10 and some more, **2LS3**: Place value and regrouping 2 digit numbers. **2LS4**: Counting on and back in 1's and 10's from any number. **2LS5:** Representing, ordering and comparing numbers to 100 and quantities for measures. **2LS6**: Estimation and magnitude. **2LS7: Numbers to 20** – Mental addition and subtraction. **2LS8**: Finding complements of 10 and 100 including measures.	**2LS9:** Add and subtract numbers mentally using 1 and 2 digit numbers. **2LS10**: Finding part or whole unknown. **2LS11**: **Money** – making combinations and finding change. **2LS12**: **Comparison** – difference, more, less fewer. **2LS13: Measures** – estimation and measures using different scales.	**2LS14: Statistics** – Totalling and comparing amounts in black graphs, pictograms, tables and tally charts. **2LS15**: Written addition method. **2LS16**: Commutativity in addition and subtraction. **2LS17:** Written subtraction method. **2LS18**: Problem solving with addition and subtraction in a range of contexts. **2LS19& 20: Time** - Telling the time. Estimating ordering and comparing time.	**2LS23-25**: **Multiplication** – Multiples and repeated addition; number of groups, groups size and product; problem solving. **2LS26 &27**: **Division** – Sharing and grouping, sharing and grouping problems including remainders.	**2LS26 – 32: Fractions** – Finding halves, quarters and thirds of amounts; finding halves, quarters and thirds of shapes; finding three-quarters of shapes and amounts; equivalence; of continuous quantities. **2LS33: Time** – Telling time to the nearest 5 minutes. **2LS34: Problem solving** for all operations (including fractions)	**2LS35: Multiplication and division** – equality and balance. **2LS36 & 37: Geometry** – properties and 2D and 3D shapes, classifying and sorting; Symmetry. **2LS38**: Mental calculation review. **2LS39 & 40: Geometry** – Sequencing; rotations and right angles. **2LS41**: Place value and written calculation review **Review and close the gap sessions.**
Year 3	**3LS1**:Place value and regrouping. **3LS2**:Counting on and back in ones, tens and hundreds. **3LS3**:Estimation, magnitude and rounding. **3LS4**:**Measures** – Comparison, estimation and magnitude. **3LS5 & 6: Mental fluency** – addition; subtraction. **3LS7**: Fact families and applying the inverse **3LS8**: Written addition,	**3LS9**: Written subtraction. **3LS10: Problem solving** – worded problems. **3LS11: Statistics** – Interpreting bar charts and tables. **3LS12**: Angles, right angles and estimation. **3LS13:** perpendicular and parallel lines, vertical and horizontal lines. **3LS14:** 2D shape. **3LS15**: perimeter inc problem solving.	**3LS16: Multiplication** – 3,4 and 8. **3LS17: Division** – 1,2,3,4,5 & 8. **3LS18: Multiplication** – strategy, associative and distributive laws. **3LS19: Statistics** – pictograms and scaled bar charts. **3LS20**: Multip and division worded problems. **3LS21: Fractions** – finding fractions of discrete and continuous quantities.	**3LS22-24: Fractions** – ordering and comparing; adding and subtracting with the same denominators; problem solving with unit and non-unit fractions. **3LS25 & 26: Multiplication** – multiplying multiples of 10; formal written multiplication.	**3LS27 & 28: Division** – prob solving, sharing and grouping; 2 & 3 digit numbers by 1 digit numbers inc halving. **3LS29: Multiplication, division and fractions** – Scaling and correspondence. **3LS30: Division** – long division. **3LS31-33: Time** – hours, mins, secs, days, weeks, months, years; telling the time & duration.	**3LS34**: Securing the four operations with whole number incl prob solving. **3LS35-37: Place value and decimals** – Ten times greater/smaller; regrouping; estimation, comparing and rounding. **3LS38: Measures** – measuring and problem solving. **3LS39: 3D shape** – building and identifying properties. **Review and close the gap sessions.**

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Year 4	**4LS1: Place value** – order and compare numbers beyond 1000. **4LS2**: rounding estimation and magnitude. **4LS3:** securing addition and subtraction mental fluency. **4LS5**: counting in multiples of 6,7,9,25 and 1000. **4LS6**: Multiplication and division facts. **4LS7**: Factor pairs, integer scaling and correspondence problems.	**4LS8:** Problem solving including measures to apply place value, mental strategies and arithmetic laws. **4LS9**: Multiply or divide a 1 or 2 digit number by 10 and 100. **4LS10 & 11**: Measures – conversion of units; compare, estimate and calculate. **4LS12**: Discrete and continuous data. **4LS13**: Perimeter.	**4LS14**: property of shape. **4LS15:** Symmetry. **4LS16:** Decimal numbers. **4LS17**: Calculating with decimals. **4LS18: Measure** – money. **4LS19**: Prob solving involving decimals to 2 decimal places. **4LS20-22: Fractions** – + and - with the same denominator; finding fractions of quantities; fractions in the context of measure.	**4LS23**: Equivalent fractions, ordering and comparing. **4LS24**: multiply 2 and 3 digit numbers by a 1 digit number using a formal written layout. **4LS25**: Divide 2 and 3 digit numbers by a 1 digit number using a formal written layout.	**4LS26: Time** –Analogue and digital 12 and 24 hour clocks. **4LS27: Statistics. 4LS28:** Roman numerals to 100 and zero. **4LS29:** Negative numbers. **LS30-33: Geometry** – Angles, properties of triangles; co-ordinates in the first quadrant and translations; position and direction.	**4LS34**: Multiplication and division review. 4LS35 – Area. **4LS36**: Fractions review. **4LS37**: Application and problem solving. **Review and close the gap sessions.**
Year 5	**5LS1:** Place value and rounding of large numbers. **5LS2**: Interpret negative numbers. **5LS3:** Place value of numbers with up to 3 decimal places. **5LS4**: multiply and divide by 10, 100 and 1000. **5LS5:** properties of number. **5LS6**: Prime and composite numbers. **5LS7:** Multiply and divide mentally. **5LS8**: Solve problems involving knowledge of key facts.	**5LS9**: Add and subtract using a range of strategies. **5LS10**: Add and subtract using formal written methods. **5LS11**: Formal written method for multiplication. **5LS12**: Formal written method for short division. **5LS13-15: Fractions** – equivalent fractions, compare and order fractions, adding and subtracting fractions.	**5LS16: Problem solving** – all four operations. **5LS17 & 18: Fractions** – multiply by whole numbers, problem solving. **5LS19: Measure** – Converting units of measure. **5LS20**: Area. **5LS21:** Volume and Capacity.	**5LS22 & 23**: Percentages and problem solving. **5LS24**: 3D shapes from 2D representation. **5LS25**: Reflection and translation. **5LS26**: Perimeter. **5LS27:** Estimate, compare, measure and draw angles. **5LS28**: Identify unknown angles.	**5LS29:** Formal methods for division and multiplication. **5LS30**: Strategies for multiplication and division. **5LS31**: Solving problems involving scaling by simple fractions and rates. **5LS32:** Conversion of imperial and metric units of measure. **5LS33**: Fractions, decimals and percentages problem solving. **5LS34:** Reading timetables and calculating with time.	**5LS35**: Solve problems involving the 4 operations. **5LS36:** Distinguish between regular and irregular polygons. **5LS37:** Use properties of rectangles. **5LS38 &39**: Statistics – solve comparison, sum and difference problems using information in a line graph; Interpreting and evaluating information presented in charts and tables. **5LS40**: Roman numerals. **Review and close the gap sessions.**
Year 6	**6LS1**: Place value. **6LS2**: Multiply and divide by 10, 100 and 1000. **6LS3**: Choosing effective mental calculation strategies. **6LS4**: Problem solving with the 4 operations. **6LS5**: Application of factors, multiples and prime's. **6LS6-8**: Fractions – Equivalent fractions; Comparing and ordering; adding and subtractions.	**6LS9-11:** Fractions – fraction and decimal equivalents; fractions decimals and percentages; calculating percentages. **6LS12**: Formal written method of multiplication. **6LS13:** Area of parallelograms and triangles. **6LS14:** Formal written method of short division. **6LS15:** Properties of shape.	**6LS16**: Order of operations and algebra. **6LS17**: Formal written method for long division. **6LS18**: Exploring relationships between perimeter and area. **6LS19:** Recognise and find angles. **6LS20:** Reflection and translation. **6LS21-23: Fractions** – Multiplying; dividing; problem solving.	**6LS24**: Ratio and proportion. **6LS25**: Volume. **6LS26:** Measures. **6LS27**: Statistics – Interpret line graphs and pie charts. **6LS28**: Algebra and sequences.	**6LS29:** Statistics – Calculate and interpret mean average. **6LS30:** Application of previous year's knowledge. **6LS31**: Application of known facts and calculation strategies. **SATS**	**Preparation for KS3**

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	Key Skills and Knowledge		
	Beacon 1	**Beacon 2**	**Beacon 3**
Knowledge/Skills	***By end of KS1 :*** ***Year 1*** • 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; count in multiples of 2s, 5s and 10s • given a number, identify 1 more and 1 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 • read and write numbers from 1 to 20 in numerals and words • read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • represent and use number bonds and related subtraction facts within 20 • add and subtract one-digit and two-digit numbers to 20, including 0 • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and	***By end of LKS2*** ***Year 3*** • 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 3-digit number (100s, 10s, 1s) • compare and order numbers up to 1,000 • identify, represent and estimate numbers using different representations • read and write numbers up to 1,000 in numerals and in words • solve number problems and practical problems involving these ideas • • add and subtract numbers mentally, including: a three-digit number and 1s a three-digit number and 10s a three-digit number and 100s • add and subtract numbers with up to 3 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 • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	***By end of UKS2*** ***Year 5*** • 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 0 • round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 • solve number problems and practical problems that involve all of the above • read Roman numerals to 1,000 (M) and recognise years written in Roman numerals • 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

	missing number problems such as 7 = ? – 9 • solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays • recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity • recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity • compare, describe and solve practical problems for: • lengths and heights, mass and weight, capacity and volume • measure and begin to record the following: • lengths and heights • mass/weight • capacity and volume • time (hours, minutes, seconds) • recognise and know the value of different denominations of coins and notes • sequence events in chronological order using language • 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	• write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods • 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 • 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 that 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 • 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, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 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 numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • multiply and divide numbers mentally, drawing upon known facts • 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 • multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 • 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

	• recognise and name common 2-D and 3-D shapes • describe position, direction and movement, including whole, half, quarter and three-quarter turns ***Year 2*** • Count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward • recognise the place value of each digit in a two-digit number (10s, 1s) • compare and order numbers from 0 up to 100 • read and write numbers to at least 100 in numerals and in words • 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 • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems • 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	• recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • recognise and show, using diagrams, equivalent fractions with small denominators • add and subtract fractions with the same denominator within one whole [for example, + =] • compare and order unit fractions, and fractions with the same denominators • solve word problems • measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) measure the perimeter of simple 2-D shapes add and subtract amounts of money to give change, using both £ and p in practical contexts • tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 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 draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D	• solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates • compare and order fractions whose denominators are all multiples of the same number • 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 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 = $\frac{71}{100}$] • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents

	• choose and use appropriate standard units to estimate and measure • compare and order lengths, mass, volume/capacity and record the results • 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 • compare and sequence intervals of 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 and the number of hours in a day • identify and describe the properties of 2-D shapes • identify and describe the properties of 3-D shapes • identify 2-D shapes on the surface of 3-D shapes • compare and sort common 2-D and 3-D shapes and everyday objects	shapes in different orientations and describe them recognise angles as a property of shape or a description of a turn identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle identify horizontal and vertical lines and pairs of perpendicular and parallel lines • interpret and present data using bar charts, pictograms and tables • solve one-step and two-step questions ***Year 4*** • count in multiples of 6, 7, 9, 25 and 1,000 • find 1,000 more or less than a given number • count backwards through 0 to include negative numbers • recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s) • order and compare numbers beyond 1,000 • identify, represent and estimate numbers using different representations • round any number to the nearest 10, 100 or 1,000 • 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	• round decimals with 2 decimal places to the nearest whole number and to 1 decimal place • read, write, order and compare numbers with up to 3 decimal places • solve problems involving number up to 3 decimal places • recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction • 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 • convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] • understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of rectangles (including squares), including using standard units, square centimetres

	• order and arrange combinations of mathematical objects in patterns and sequences
	• use mathematical vocabulary to describe position, direction and movement
	•
		• changed to include the concept of 0 and place value
		• add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
		• 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 100 and dividing tenths by 10
		• 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
		• recognise and write decimal equivalents of any number of tenths or hundreds
		• recognise and write decimal equivalents
		• find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
		• round decimals with 1 decimal place to the nearest whole number
		• compare numbers with the same number of decimal places up to 2 decimal places
		• solve simple measure and money problems involving fractions and decimals to 2 decimal places
		• convert between different units of measure
			(cm²) and square metres (m²), and estimate the area of irregular shapes
			• estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]
			• solve problems involving converting between units of time
			• use all four operations to solve problems involving measure
			• 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 1 whole turn (total 360°)
			  • angles at a point on a straight line and half 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
			• identify, describe and represent the position of a shape following a reflection or translation, using the appropriate

		• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • find the area of rectilinear shapes by counting squares • estimate, compare and calculate different measures, including money in pounds and pence • read, write and 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 • compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • identify acute and obtuse angles and compare and order angles up to 2 right angles by size • 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 • 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 • plot specified points and draw sides to complete a given polygon	language, and know that the shape has not changed • solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables, including timetables ***Year 6*** • 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 0 • solve number and practical problems that involve all of the above • multiply multi-digit numbers 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 short division

		• 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	where appropriate, interpreting remainders according to the context • 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 4 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 • 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 [for example, × =] • divide proper fractions by whole numbers [for example, ÷ 2 =] • associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example,] • identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places • multiply one-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 • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts • solve problems involving the calculation of percentages [for example, of measures

			and such as 15% of 360] and the use of percentages for comparison • 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 • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with 2 unknowns • enumerate possibilities of combinations of 2 variables • solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 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 • 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 cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3] • draw 2-D shapes using given 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 • describe positions on the full coordinate grid (all 4 quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes

			• interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average