Autumn 1	Year 4	Year 5
Number and place value 1 week	Find 1000 more or less than a given number Recognise the place value of each digit in a 4 digit number Count in multiples of 6 or 9 Order and compare numbers beyond 1000 Identify, represent and estimate numbers using different representations	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 • round any number up to 1 000 000 to the nearest 10, 100 and 1000
Number – Addition and subtraction 2 week	practise mental methods with increasingly large numbers to aid fluency * • add numbers with up to four digits using the formal written method of columnar addition where appropriate • estimate answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why extend understanding of the number system and decimal place value to tenths * • recognise and write decimal equivalents of any number of tenths • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places • solve simple measure problems involving decimals to two decimal places	add and subtract numbers mentally with increasingly large numbers • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why add whole numbers with more than four digits, including using formal written methods (columnar addition) • add numbers mentally with increasingly large numbers • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
Number – Multiplication and division 2 weeks	• count in multiples of 7 • recall multiplication and division facts for multiplication tables up to 12 × 12 Recognise and use factor pairs and commutativity in mental calculations Count in multiple 25 and 100 • use place value, known and derived facts to multiply mentally, including: multiplying by 0 and 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations • multiply two-digit numbers by a two-digit number using formal written layout Divide • solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit	count in multiples of 6 and 9 • recall multiplication and division facts for multiplication tables up to 12 × 12 • recognise and use factor pairs and commutativity in mental calculations identify multiples and factors, including fi nding all factor pairs of a number, and common factors of two numbers • multiply numbers up to four digits by a one-digit number using a formal written method • multiply and divide numbers mentally drawing upon known facts • multiply and divide whole numbers by 10, 100 and 1000 • 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 squares and cubes • solve problems involving addition, subtraction, multiplication and division, and a combination of these, including understanding the meaning of the equals sign 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
Measurement – Time 1 week	convert between different units of measure • 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	solve problems involving converting between units of time • use all four operations to solve problems involving measure, including scaling
	Assess and Review	

Autumn 2	Year 4	Year 5
Number – Fractions and decimals 2 weeks	extend the use of the number line to connect fractions, numbers and measures recognise and show, using diagrams, families of common equivalent fractions • understand the relation between non-unit fractions and multiplication and division of quantities, with particular emphasis on tenths and hundredths * • 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	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 • develop their understanding of fractions as numbers, measures and operators by fi nding fractions of numbers and quantities * • practise counting forwards and backwards in simple fractions * • recognise and describe linear number sequences, including those involving fractions, and find the term-to-term rule
Decimals 1 week	extend understanding of the number system and decimal place value to hundredths * • recognise and write decimal equivalents of any number of hundredths • 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 • compare numbers with the same number of decimal places up to two decimal places	read and write decimal numbers as fractions • round decimals with two decimal places to the nearest whole number and to one decimal place • practise adding decimals, including complements of 1 (for example, 0·83 + 0·17 = 1) • recognise and describe linear number sequences involving decimals and fi nd the term-to-term rule
Measurement 1 week	convert between different units of measure • estimate, compare and calculate different measures	convert between different units of metric measure • understand and use approximate equivalences between metric units and common imperial units such as pounds • use all four operations to solve problems involving measure [for example, mass] using decimal notation, including scaling
Geometry – Properties of shape 1 week	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 polygonidentify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric figure with respect to a specific line of symmetry identify acute and obtuse angles and compare and order angles up to two right angles by size	identify, describe and represent the position of a shape following a translation, using the appropriate language, and know that the shape has not changed identify, describe and represent the position of a shape following a refl ection, using the appropriate language, and know that the shape has not changed
Statistics		
	Assess and Review	

Spring 1	Year 4	Year 5
Number – Number and place value 1 week	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 • round any number to the nearest 10 or 100 • solve number and practical problems that involve all of the above and with increasingly large positive numbers	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical problems that involve all of the above
Number – Addition and Subtraction 2 weeks	practise mental methods with increasingly large numbers to aid fluency * • add and subtract numbers with up to four digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	subtract whole numbers with more than four digits, including using formal written methods (columnar subtraction) • 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 • practise adding and subtracting decimals, including a mix of whole numbers and decimals *
Number – Multiplication and Division 2 weeks	multiply 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 are connected to m objects	multiply numbers up to four digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers divide numbers up to four digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • solve problems involving addition, subtraction, multiplication and division, and a combination of these, including understanding the meaning of the equals sign
Measurement – Length, volume and capacity 1 week	convert between different units of measure • estimate, compare and calculate different measures	convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre) • understand and use approximate equivalences between metric units and common imperial units such as inches • use all four operations to solve problems involving measure [for example, length] using decimal notation, including scaling
	Assess and Review	

Spring 2	Year 4	Year 5
Number – Number and place value 1 week	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 • 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	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 • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • 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 1 week	practise mental methods with increasingly large numbers to aid fluency * • subtract numbers with up to four digits using the formal written method of columnar subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	mentally add and subtract tenths, and one-digit whole numbers and tenths * • practise adding and subtracting decimals, including a mix of whole numbers and decimals, decimals with different numbers of decimal places, and complements of 1 [for example, 0·83 + 0·17 = 1]
Number – Fractions 1 week	use factors and multiples to recognise equivalent fractions and simplify where appropriate • recognise and show, using diagrams, families of common equivalent fractions • add and subtract fractions with the same denominator • solve simple measure and money problems involving fractions	compare and order fractions whose denominators are all multiples of the same number • add and subtract fractions with the same denominator and denominators that are multiples of the same number • recognise and use thousandths and relate them to tenths and hundredths
Measurement – Perimeter 1 week	convert between different units of measure measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • find the area of rectilinear shapes by counting squares • relate area to arrays and multiplication	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 (cm_2) and square metres (m_2), and estimate the area of irregular shapes
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	solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables, including timetables
	Assess and Review	

Summer 1	Year 4	Year 5
Number – Addition and Subtraction 2 weeks	add and subtract numbers with up to four digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why • estimate, compare and calculate different measures, including money in pounds and pence	add and subtract whole numbers with more than four 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 use all four operations to solve problems involving measure [for example, money] using decimal notation, including scaling
Number – Fractions and Decimals 2 week Switch with addition and subtraction this term?? Percentages – Y5	use factors and multiples to recognise equivalent fractions and simplify where appropriate • recognise and show, using diagrams, families of common equivalent fractions • add and subtract fractions with the same denominator • solve simple measure and money problems involving fractions extend understanding of the number system and decimal place value to tenths and then hundredths * • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to one quarter, one half, three quarters • 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 one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places • solve simple measure and money problems involving decimals to two decimal places	recognise mixed numbers and improper fractions and convert from one form to the other, and write mathematical statements >1 as a mixed number • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • connect equivalent fractions >1 that simplify to integers with division, and other fractions >1 to division with remainders, using the number line and other models, and hence move from these to improper and mixed fractions read and write decimal numbers as fractions • 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 • read, write, order and compare numbers with up to three decimal places • solve problems involving number up to three decimal places recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal • solve problems that require knowing percentage anddecimal equivalents of half, quarter, fifth, 2-fifths, 4-fifths and those fractions with a denominator of a multiple of 10 or 25 • make connections between percentages, fractions and decimals
Measurement 1 week	convert between different units of measure • 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	convert between different units of metric measure (for example litre and millilitre) • understand and use approximate equivalences between metric units and common imperial units such as pints • estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water] • use all four operations to solve problems involving measure [for example volume] using decimal notation, including scaling
	Assess and Review	

Summer 2	Year 4	Year 5
Number – Multiplication and Division 2 weeks	multiply 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 are connected to m objects use place value, known and derived facts to divide mentally, including dividing by 1 • practise to become fl uent in the formal written method of short division with exact answers * • solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems, and harder correspondence problems such as n objects are connected to m objects	multiply numbers up to four digits by a two-digit number using a formal written method, including long multiplication for two-digit numbers • divide numbers up to four digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • 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 multiply and divide numbers mentally drawing upon known facts • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates use all four operations to solve problems involving measure [for example, money] using decimal notation,including scaling
Geometry – Properties of shapes 2 weeks	identify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric fi gure with respect to a specifi c line of symmetry identify acute and obtuse angles and compare and order angles up to two right angles by size draw 2-D shapes and describe them recognise angles as a property of shape compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes 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	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 12 a turn (total 180°) – other multiples of 90° use the properties of rectangles to deduce related facts and fi nd missing lengths and angles • distinguish between regular and irregular polygons based on reasoning about equal sides and angles • use angle sum facts and other properties to make deductions about missing angles and relate these to missing number problems * • use the term diagonal and make conjectures about the angles formed between sides, and between diagonals and parallel sides, and other properties of quadrilaterals * • use conventional markings for parallel lines and right angles
Statistics 1 week	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	solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables
	Assess and Review	