

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of +, −, × and ÷ facts)	
<p>Read and write whole numbers up to 10 000. Add/subtract 1, 10, 100 to any whole number. Count on or back in 10s, 100s from any two- or three-digit number. Round any three-digit number to the nearest 10 or 100. Recall addition and subtraction facts for each number up to 20.</p>	<p>Add/subtract a pair of two-digit numbers (not crossing 10 or 100 boundary). Derive doubles of whole numbers to 50, corresponding halves. Recall multiplication facts in ×2, ×3, ×4, ×5, ×10 tables and derive division facts. Multiply a two-digit number by 10.</p>

Unit	Days	Pages	Topic	Objectives; children will be taught to:
1	3	2-15	Place value, ordering, rounding	<p>Read and write whole numbers to 10 000 in figures and words. Know what each digit represents and partition into Th H T U. Read and write the vocabulary of estimation. Estimate up to 250 objects. Estimate a proportion (fraction). Read scales to a suitable degree of accuracy.</p>
		94-95	Reading numbers from scales	
2-3	10	34-37	Understanding + and −	<p>Consolidate understanding of relationship between addition/subtraction. Understand commutative law of addition. Count on or back in repeated steps of 1, 100, 1000. Identify near doubles. Count up through next multiple of 10, 100, 1000. Use informal pencil and paper methods to support, record or explain addition and subtraction.</p>
		40-47	Mental calculation strategies (+ and −)	
		48-51	Pencil and paper procedures (+ and −)	<p>Use informal pencil and paper methods to support, record or explain addition and subtraction.</p>
		82-85	Money and 'real life' problems	<p>Convert £ to p. Choose appropriate number operations and calculation methods to solve money or 'real life' word problems with one/two steps.</p>
		72-75	Making decisions, checking results	<p>Explain and record methods. Check with addition in a different order.</p>
4-6	13	86-101	Measures, including problems	<p>Use, read, write km, m, cm, mm and mile. Know and use relationships between units. Know $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{10}$ of 1 kilometre in m, 1 metre in cm or mm. Suggest suitable units and equipment to estimate or measure length. Record metres and centimetres using decimals, and other measurements using mixed units. Convert up to 1000 cm to metres and vice versa. Measure/calculate perimeter of rectangles and simple shapes (cm). Choose appropriate number operations and calculation methods to solve measurement word problems with one or more steps. Explain and record methods.</p>
		102-111	Shape and space	<p>Describe and visualise 3-D and 2-D shapes, inc. tetrahedron, heptagon. Recognise equilateral and isosceles triangles.</p>
		76-81	Reasoning about shapes	<p>Classify shapes (right angles, regularity, symmetry). Recognise position on square grids with numbered lines. Investigate general statements about shapes.</p>
7	2		Assess and review	

<p>Read and write whole numbers up to 10 000. Count on/back in 10s, 100s from any two-/three-digit number. Round any three-digit number to the nearest 10 or 100. Add/subtract a pair of two-digit numbers (crossing 10 but not 100 boundary).</p>	<p>Derive doubles of whole numbers to 50, corresponding halves. Recall addition and subtraction facts for each number up to 20. Recall multiplication facts in ×2, ×3, ×4, ×5, ×10 tables and derive division facts. Multiply and divide whole numbers by 10.</p>
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8	5	16-21	Properties of numbers and number sequences	<p>Recognise, extend number sequences formed by counting from any number in steps of constant size, e.g. 25 to 500. Recognise odd and even numbers up to 1000 and some of their properties, e.g. sums, differences of pairs of odd/even numbers. Solve number puzzles, recognise patterns, generalise and predict.</p>
		76-81	Reasoning about numbers	
9-10	10	52-57	Understanding × and ÷	<p>Extend understanding of × and ÷ and their relationship to each other and to + and −. Use doubling and halving of two-digit numbers, e.g. $\times 4 = \text{double double}$, $\times 5 = \times 10 \text{ half}$, $\times 20 = \times 10 \text{ double}$, $\times 8 = \times 4 \text{ double}$, $\frac{1}{4} = \text{half of one } \frac{1}{2}$. Approximating first, use informal pencil and paper methods to multiply and divide. Choose appropriate number operations and calculation methods to solve money and 'real life' word problems with one or more steps. Explain and record methods. Check with equivalent calculation.</p>
		60-65	Mental calculation strategies (× and ÷)	
		66-69	Pencil and paper procedures (× and ÷)	
		82-85	Money and 'real life' problems	
		72-75	Making decisions, checking results	
11	5	22-31	Fractions and decimals	<p>Use fraction notation. Recognise fractions that are several parts of a whole, and mixed numbers. Find fractions of shapes. Relate fractions to division and find simple fractions of quantities.</p>
12	5	34-37	Understanding + and −	<p>Consolidate understanding of subtraction as the inverse of addition. Find a small difference by counting up.</p>
		40-47	Mental calculation strategies (+ and −)	<p>Use relationship between + and −.</p>
		48-51	Pencil and paper procedures (+ and −)	<p>Develop written methods for + and − of whole numbers less than 1000.</p>
		98-101	Time, including problems	<p>Use, read, write vocabulary of time. Read time to 1 min. on analogue/12-hour digital clock. Use 9:53, a.m. and p.m. Solve time word problems.</p>
13	5	114-117	Handling data	<p>Solve a given problem by collecting, classifying, representing and interpreting data in tally charts, frequency tables, pictograms (symbols representing 2, 5, 10 units). Include use of computer.</p>
14	2		Assess and review	
Total	60			

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of +, −, × and ÷ facts)				
<p>Read and write whole numbers up to 10 000. Count on/back in 10s, 100s from any two-/three-digit number. Recall addition and subtraction facts for each number to 20. Round any three-digit number to the nearest 10 or 100. Add/subtract a pair of two-digit numbers (crossing 10 but not 100 boundary).</p>			<p>Derive doubles of multiples of 10 to 500, corresponding halves. Recall multiplication facts in ×2, ×3, ×4, ×5, ×10 tables and derive division facts. Derive multiplication facts in 8 times table and begin to recall them. Multiply and divide whole numbers by 10. Write subtraction fact corresponding to given addition fact.</p>	
Unit	Days	Pages	Topic	Objectives; children will be taught to:
1	3	2-15 94-95	Place value, ordering, rounding Reading numbers from scales	<p>Multiply and divide an integer up to 1000 by 10; understand the effect. Read and write the vocabulary of comparing and ordering numbers. Use symbols = < > correctly. Give a number lying between two others. Use vocabulary of approximation. Round any positive number less than 1000 to nearest 10. Recognise negative numbers in context: number line, thermometer.</p>
2-3	15	34-37 40-47 48-51 82-85 72-75	Understanding + and − Mental calculation strategies (+ and −) Pencil and paper procedures (+ and −) Money and 'real life' problems Making decisions, checking results	<p>Understand principle (not name) of commutative law for + not −. Add several small numbers by finding pairs that total 10, or 9 or 11. Partition into tens and units, adding tens first. Add three two-digit multiples of 10. Develop/refine written methods for addition/subtraction, including money. Choose appropriate number operations and calculation methods to solve money and 'real life' word problems with one or more steps. Explain working. Check with an equivalent calculation.</p>
5-6	8	86-101 102-111 76-81	Measures, and time, including problems Shape and space Reasoning about shapes	<p>Estimate and check times using seconds, minutes, hours. Measure and compare using kilograms and grams, and know and use the relationship between them. Know $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and $\frac{1}{10}$ of 1 kg in grams. Suggest suitable units and equipment to estimate or measure mass. Read scales. Record measurements to suitable degree of accuracy, using mixed units, or the nearest whole/half/quarter unit (e.g. 3.25 kg). Measure and calculate area of rectangles and simple shapes, using counting methods and standard units (square centimetres). Choose appropriate number operations and calculation methods to solve measurement word problems with one or more steps. Explain working. Make shapes and discuss properties. Visualise solid shapes from 2-D drawings. Identify simple nets. Recognise clockwise, anti-clockwise. Start to draw, measure and order angles. Use eight compass points. Recognise horizontal and vertical lines. Solve shape problems or puzzles. Explain reasoning and methods.</p>
7	2		Assess and review	
<p>Read and write whole numbers up to 10 000. Count on or back in equal steps including below zero. Derive doubles of multiples of 10 to 500, corresponding halves. Round any three-digit number to the nearest 10 or 100. Add/subtract two two-digit numbers (crossing 10 but not 100 boundary).</p>			<p>Recall addition and subtraction facts for each number up to 20. Recall multiplication facts in ×2, ×3, ×4, ×5, ×10 tables and derive division facts. Derive multiplication facts in ×6 table and begin to recall them. Multiply and divide whole numbers by 10. Derive addition pairs that total 100, multiples of 50 that total 1000.</p>	
8	5	16-21 76-81	Properties of numbers and number sequences Reasoning about numbers	<p>Recognise, extend number sequences formed by counting from any number in steps of constant size, extend beyond zero if counting back. Investigate general statements about familiar numbers. Explain methods and reasoning.</p>
9-10	10	52-57 60-65 66-69 82-85 72-75	Understanding × and ÷ Mental calculation strategies (× and ÷) Pencil and paper procedures (× and ÷) Money and 'real life' problems Making decisions, checking results	<p>Understand commutative and associative laws of multiplication. Divide a whole number of £ by 2, 4, 5 or 10 to give £/p. Use closely related facts, e.g. derive ×9 or ×11 from ×10, or derive ×6 from ×4 plus ×2. Partition and multiply. Develop and refine written methods for TU × U. Choose appropriate number operations and calculation methods to solve money and 'real life' word problems with one or more steps. Explain working. Check with inverse operation.</p>
11	5	22-31	Fractions and decimals	<p>Recognise equivalence of simple fractions. Identify two fractions with total of 1. Compare a fraction with one half, and say whether it is greater or less. Use decimal notation for tenths, hundredths (money, metres and centimetres) and use in context. Round to the nearest £ or metre. Convert £ to p, or metres to centimetres, and vice versa. Order decimals with two places.</p>
12	5	114-117	Handling data	<p>Solve a given problem by collecting, classifying, representing and interpreting data in bar charts; intervals labelled in 2s, 5s, 10s, 20s. Include use of computer.</p>
13	2		Assess and review	
Total	55			

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of +, −, × and ÷ facts)	
<p>Read and write whole numbers up to 10 000. Add/subtract 10, 100, 1000 from any two-/three-digit number. Derive doubles of multiples of 100 to 5000, corresponding halves. Round any three-digit number to the nearest 10 or 100. Add/subtract a pair of two-digit numbers (crossing 10 but not 100 boundary).</p>	<p>Recall addition and subtraction facts for each number to 20. Derive addition pairs that total 100, and multiples of 50 that total 1000. Recall multiplication facts in $\times 2$, $\times 3$, $\times 4$, $\times 5$, $\times 10$ tables and derive division facts. Begin to recall facts in $\times 6$ and $\times 8$ tables. Multiply or divide whole numbers by 10 or 100. Multiply TU by U, e.g. 13×3.</p>

Unit	Days	Pages	Topic	Objectives; children will be taught to:
1	3	2-15 94-95	Place value, ordering, rounding Reading numbers from scales	Begin to multiply whole numbers by 100. Order a set of whole numbers up to 10 000. Round any positive integer to the nearest 10 or 100. Read a variety of scales and dials to a suitable degree of accuracy.
2-3	10	34-37 40-47 48-51 82-85 72-75	Understanding + and − Mental calculation strategies (+ and −) Pencil and paper procedures (+ and −) Money and 'real life' problems Making decisions, checking results	Understand the principles of associative law for addition (not name). Add or subtract the nearest multiple of 10 and adjust. Use number facts and place value to add/subtract mentally any pair of two-digit whole numbers. Develop, refine written methods for column addition/subtraction. Add more than two whole numbers less than 1000, and money. Choose appropriate operations and calculation methods to solve money and 'real life' word problems with one or more steps. Explain working. Check using knowledge of sums of odd/even numbers.
4-6	13	86-101 102-111 76-81	Measures, including problems Shape and space Reasoning about shapes	Use, read, write litre (l), millilitre (ml), pint. Know $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{10}$ of 1 litre in ml. Suggest suitable units and equipment to estimate or measure capacity. Read scales. Record measurements to suitable degree of accuracy, using mixed units, or the nearest whole/half/quarter unit (e.g. 3.25 litres). Choose appropriate number operations and calculation methods to solve measurement word problems with one or more steps. Explain working. Sketch reflection of simple shape in a mirror. Read and begin to write the vocabulary of movement. Make and describe patterns involving translation. Begin to measure angles in degrees. Know whole turn, 360° , 4 right angles; quarter turn, 90° , 1 right angle; half turn, 180° , 2 right angles. Recognise 45° as half a right angle.
7	2		Assess and review	

<p>Read and write whole numbers up to 10 000. Count on/back in equal steps including beyond zero. Recall addition and subtraction facts for each number to 20. Round any three-digit number to the nearest 10 or 100. Add/subtract any pair of two-digit numbers (including crossing 10 and 100 boundary).</p>	<p>Derive doubles of multiples of 100 to 5000, corresponding halves. Derive addition pairs that total 100, multiples of 50 that total 1000. Recall multiplication facts in $\times 2$, $\times 3$, $\times 4$, $\times 5$, $\times 10$ tables and derive division facts. Begin to recall facts in $\times 6$ and $\times 8$ tables. Derive facts in $\times 9$ table, e.g. from 10 lots subtract 1 lot. Multiply by partitioning, e.g. 23×4.</p>
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8	5	16-21 76-81	Properties of numbers and number sequences Reasoning about numbers	Recognise multiples of 2, 3, 4, 5, 10, up to 10th multiple. Solve number problems and puzzles. Explain methods and reasoning orally and in writing.
9-10	10	52-57 60-65 66-69 82-85 72-75	Understanding \times and \div Mental calculation strategies (\times and \div) Pencil and paper procedures (\times and \div) Money and 'real life' problems Making decisions, checking results	Understand distributive law. Round up or down after division. Use relation between \times and \div . Use known facts to multiply and divide. Develop and refine written methods for TU \div U. Choose appropriate operations and calculation methods to solve money and 'real life' word problems with one or more steps. Explain working. Check results by approximating.
11	5	22-31	Fractions and decimals	Begin to use ideas of simple proportion. Recognise the equivalence of decimal, fraction forms of one half, one quarter and tenths.
12	5	34-37 40-47 48-51 98-101	Understanding + and − Mental calculation strategies (+ and −) Pencil and paper procedures (+ and −) Time, including problems	Consolidate understanding of addition and subtraction. Add/subtract mentally any pair of two-digit whole numbers. Refine column addition and subtraction. Read timetables and use this year's calendar. Solve problems involving time.
13	5	114-117	Handling data	Solve a given problem by collecting, classifying, representing and interpreting data in Venn and Carroll diagrams: two criteria. Use a computer and a branching tree program to sort shapes or numbers.
14	2		Assess and review	
Total	60			

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of +, -, × and ÷ facts)				
<p>Read and write whole numbers up to 100 000. Count on/back in equal steps (e.g. 25, 100), including beyond zero. Round any three- or four-digit number to nearest 10 or 100. Recall addition and subtraction facts for each number up to 20. Add/subtract any pair of two-digit numbers, including crossing 100.</p>			<p>Find pairs with sum of 100; derive multiples of 50 with a sum of 1000. Double or halve any whole number to 100. Recall facts in times ×2, ×3, ×4, ×5, ×6, ×10 tables and derive division facts. Begin to recall facts in ×7, ×8, ×9 tables, squares to 10 × 10. Multiply or divide whole numbers up to 10 000 by 10 or 100.</p>	
Unit	Days	Pages	Topic	Objectives; children will be taught to:
1	3	2-15	Place value, ordering, rounding	Read and write whole numbers in figures and in words, and know what each digit represents. Multiply and divide any positive whole number up to 10 000 by 10 or 100 and understand the effect. Use the vocabulary of comparing and ordering numbers. Give one or more numbers lying between two others. Develop calculator skills and use a calculator effectively.
		70-71	Using a calculator	
2-3	10	52-57	Understanding × and ÷	Understand the effect of and relationships between the four operations, and the principles of the arithmetic laws as they apply to multiplication. Use doubling/halving: double any two-digit number, halve an even number, double the other, multiply 25 by × 100, then ÷ 4; multiply by 16 by × 8, then double; find $\frac{1}{6}$, by halving $\frac{1}{3}$.
		60-65	Mental calculation strategies (× and ÷)	Approximate first. Use informal pencil and paper methods to support, record or explain × and ÷.
		66-69	Pencil and paper procedures (× and ÷)	Extend written methods to $HTU \times U$ or $U.t \times U$. Use all four operations to solve money or 'real life' word problems. Choose appropriate operations/calculation methods. Explain working. Check by estimating. Use inverse operation.
		82-85 70-75	Money and 'real life' problems Making decisions, checking results, including using a calculator	
4-5	10	22-33	Fractions, decimals and percentages	Use fraction notation, including mixed numbers, and vocabulary numerator and denominator. Change an improper fraction to a mixed number. Recognise simple equivalent fractions, including tenths and hundredths. Use decimal notation for tenths and hundredths, know what each digit represents in numbers with up to two decimal places. Begin to understand percentage as the number of parts in every 100. Solve simple problems involving ratio (one for every).
		26-27	Ratio and proportion	
6	8	112-117 70-71	Handling data Using a calculator	Discuss chance or likelihood. Present and interpret data on a bar chart and bar line graph: axis in 2s, 5s, 10s, 20s, 100s. Recognise when intermediate points have no meaning. Make a simple database on paper. Identify the mode.
7	2		Assess and review	
<p>Read and write whole numbers to at least 100 000. Count on/back in equal steps (e.g. 25, 100, 0.1), including beyond zero. Round any three- or four-digit number to nearest 10 or 100. Recall addition and subtraction facts for each number up to 20. Add/subtract any pair of two-digit numbers, including crossing 100.</p>			<p>Double any whole number to 100 and multiples of 10 to 1000. Recall facts in ×2, ×3, ×4, ×5, ×6, ×10 tables and derive division facts. Begin to recall multiplication facts in ×7, ×8, ×9 tables, squares to 10 × 10. Multiply or divide whole numbers up to 10 000 by 10 or 100. Convert metres to centimetres and £ to pence, and vice versa.</p>	
8-10	15	102-111 76-81	Shape and space Reasoning about shapes	Identify and recognise properties of rectangles. Classify triangles: isosceles, equilateral, scalene, lines of symmetry. Recognise positions, read and plot co-ordinates in first quadrant. Solve shape puzzles. Explain methods and reasoning orally and in writing. Understand, measure and calculate perimeter of rectangles, regular polygons. Measure and draw lines to nearest mm.
		86-101	Measures, including problems	Use, read and write standard metric units of length, abbreviations and relationships. Convert larger to smaller units of length. Know mile. Read the time on 24-hour digital clock, e.g. 19:53. Suggest suitable units/equipment to estimate or measure length. Record estimates/measurements from scales to suitable degree of accuracy. Use all four operations to solve measurement word problems, including time. Choose appropriate operations/calculation methods. Explain working.
11	5	40-47	Mental calculation strategies (× and ÷)	Find difference by counting up through next multiple of 10, 100, 1000. Partition into HTU and add most significant digits first.
		48-51	Pencil and paper procedures (× and ÷)	Use informal pencil and paper methods. Extend written methods +/− of two integers less than 10 000.
		82-85 70-75	Money and 'real life' problems Making decisions, checking results, including using a calculator	Use all four operations to solve money or 'real life' word problems. Choose appropriate operations/calculation methods. Explain working. Check calculations using inverse operation, including with calculator.
12	5	16-21	Properties of numbers and number sequences	Recognise and extend number sequences formed by counting from any number in steps of constant size, extend beyond zero when counting back. Know squares to at least 10 × 10. Identify factors of two-digit numbers. Solve mathematical problems or puzzles. Recognise patterns, generalise.
		76-81	Reasoning about numbers	
13	2		Assess and review	
Total	60			

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of +, -, × and ÷ facts)				
<p>Read and write whole numbers to at least 100 000. Count on/back in equal steps (25, 100, 0.1, 0.2), including beyond zero. Round decimals to nearest whole number. Order fractions. Recall addition and subtraction facts for each number up to 20. Add/subtract any pair of two-digit numbers, including crossing 100.</p>		<p>Find pairs with sum of 100, multiples of 50 sum 1000, decimals sum 1, 10. Use doubling to multiply two-digit numbers by 4. Halve any two-digit number. Recall facts in ×2, ×3, ×4, ×5, ×6, ×10 tables; derive division facts. Begin to recall facts in ×7, ×8, ×9 tables and begin to derive ÷ facts. Multiply or divide whole numbers up to 10 000 by 10 or 100.</p>		
Unit	Days	Pages	Topic	Objectives; children will be taught to:
1	3	2-15 70-71	Place value, ordering, rounding Using a calculator	Use symbols <, =, >, ≤, ≥. Order a set of whole numbers less than 1 million. Order positive and negative integers (number line, temperature). Develop calculator skills and use a calculator effectively.
2-3	15	52-57 60-65 66-69 82-85 70-75	Understanding × and ÷ Mental calculation strategies (× and ÷) Pencil and paper procedures (× and ÷) Money and 'real life' problems Making decisions, checking results, including using a calculator	Begin to use brackets. Use factors. Use closely related facts (derive ×19 from ×20, ×12 from ×10 add ×2). Partition, e.g. 47 × 6. Extend written methods to HTU ÷ U (whole number remainder). Convert £ to foreign currency. Use all four operations to solve money or 'real life' word problems. Choose appropriate operations/calculation methods. Explain working. Check with inverse operation or equivalent calculation.
4	5	22-33 70-71	Fractions, decimals and percentages Using a calculator	Order a set of fractions including mixed numbers, position on a number line. Relate fractions to division and find simple fractions, including 1/10 and 1/100, of numbers and quantities. Order a set of numbers or measurements with same number of decimal places. Round a number with one or two decimal places to the nearest integer. Use a calculator effectively, e.g. to convert fractions to decimals, to find fractions of numbers.
5	8	102-111 76-81	Shape and space Reasoning about shapes	Visualise 3-D shapes from 2-D drawings and identify nets of open cube. Recognise directions, and perpendicular and parallel lines. Understand and use degrees. Identify, estimate and order acute and obtuse angles. Use protractor to measure and draw acute and obtuse angles to 5°. Make patterns from rotating shapes. Calculate angles in a straight line. Recognise and explain patterns and relationships, generalise and predict.
6	2		Assess and review	
<p>Read and write whole numbers to at least 100 000. Order a set of positive and negative whole numbers. Round decimals to nearest whole number. Order fractions. Recall addition and subtraction facts for each number up to 20. Add/subtract any pair of two-digit numbers, including crossing 100.</p>		<p>Use doubling to multiply two-digit numbers by 4. Halve any two-digit number. Recall facts in ×2, ×3, ×4, ×5, ×6, ×10 tables; derive division facts. Recall facts in ×7, ×8, ×9 tables, and begin to derive division facts. Multiply or divide whole numbers up to 10 000 by 10 or 100. Convert m to cm and £ to pence, and vice versa; convert kg to g.</p>		
7-8	5	86-101 112-117	Measures, including problems Handling data	Understand area measured in square centimetres. Use formula in words for area of rectangle. Use, read and write standard metric units of mass, abbreviations. Know relationships between them. Convert larger to smaller units of mass. Suggest suitable units and equipment to estimate or measure mass. Read measurements from scales. Use all four operations to solve measurement word problems. Choose appropriate operations/calculation methods. Explain working. Represent and interpret data in a line graph (e.g. weight of baby at monthly intervals from birth to one year). Recognise when points can be joined to show trends.
9-10	10	40-47 48-51 82-85 70-75	Mental calculation strategies (+ and -) Pencil and paper procedures (+ and -) Money and 'real life' problems Making decisions, checking results, including using a calculator	Identify near doubles, e.g. 1.5 + 1.6. Add/subtract multiple of 10 or 100, and adjust. Use relationship between addition and subtraction. Extend written methods to addition of more than 2 integers less than 10 000, and + and - of pair of decimals both with 1 or 2 decimal places. Use all four operations to solve word problems involving money. Use all four operations to solve money or 'real life' word problems. Choose appropriate operations/calculation methods. Explain working. Check by adding in reverse order, including with calculator.
11	5	22-31 76-81	Properties of numbers and number sequences Reasoning about numbers	Recognise multiples of 6, 7, 8, 9 up to the 10th multiple. Recognise and extend sequences formed by adding 6, 7, 8, 9..., starting from any number. Know and apply tests of divisibility by 2, 4, 5, 10 or 100. Make and investigate a general statement about numbers, by finding examples that satisfy it. Suggest extensions.
12	2		Assess and review	
Total	55			

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of +, -, × and ÷ facts)				
<p>Read and write any whole number; round to nearest 10 or 100. Order positive and negative whole numbers; order fractions. Round decimals to nearest whole number. Know simple fractions as percentages. Recall addition and subtraction facts for each number up to 20. Add/subtract any pair of two-digit numbers. including crossing 100.</p>		<p>Find pairs with sum of 100, multiples of 50 sum 1000, decimals sum 1, 10. Use doubling and halving to multiply or divide two-digit numbers by 4. Recall facts in ×2, ×3, ×4, ×5, ×6, ×10 tables; derive division facts. Recall facts in ×7, ×8, ×9 tables, and begin to derive division facts. Multiply or divide whole numbers up to 10 000 by 10 or 100. Partition to multiply by 2, 5 or 10, and use tests of divisibility.</p>		
Unit	Days	Pages	Topic	Objectives; children will be taught to:
1	3	2-15 70-71	Place value, ordering, rounding Using a calculator	Use vocabulary of estimation and approximation. Make and justify estimates of large numbers and estimate simple proportions. Round to the nearest 10, 100 or 1000. Calculate a temperature rise or fall across 0°C. Develop calculator skills and use a calculator effectively.
2-3	10	52-57 60-65 66-69 82-85 70-75	Understanding × and ÷ Mental calculation strategies (× and ÷) Pencil and paper procedures (× and ÷) Money and 'real life' problems Making decisions, checking results, including using a calculator	Express a quotient as a fraction, or as a decimal when dividing a whole number by 2, 4, 5, 10 or when dividing £ and pence. Round up or down depending on the context. Use relationship between × and ÷. Use known facts and place value to multiply and divide mentally. Extend written methods to TU × TU (long multiplication). Use all four operations to solve money or 'real life' word problems, including percentages. Choose appropriate operations/calculation methods. Explain working. Check results.
4-5	10	22-33 26-27	Fractions, decimals and percentages Ratio and proportion	Relate fractions to decimal forms (including tenths, hundredths), and to percentages. Find fractions and simple percentages of whole number quantities. Solve problems involving ratio (1 for every) and proportion (1 in every).
6	8	112-117 70-71	Handling data Using a calculator	Solve a problem by representing and interpreting data in bar line charts: axis in 2s, 5s, 10s, 20s, 100s. Discuss cases where intermediate points have no meaning and cases where points where lines may be joined to show trend. Find the mode and calculate the range of a set of data. Use a computer to compare different presentations of the same data.
7	2		Assess and review	
<p>Read and write any whole number; round to nearest 10 or 100. Order positive and negative whole numbers; order fractions. Order decimals with the same number of decimal places. Know simple fractions as percentages/decimals. Find simple percentages. Add/subtract any pair of two-digit numbers, including crossing 100.</p>		<p>Find pairs with sum of 100, multiples of 50 sum 1000, decimals sum 1, 10. Use doubling and halving to multiply or divide two-digit numbers by 4. Recall multiplication facts to 10 × 10 and derive all division facts. Identify pairs of factors of small two-digit numbers. Multiply or divide whole numbers up to 10 000 by 10 or 100. Partition to multiply by 2, 3, 5 or 10, and use tests of divisibility. Convert £ to pence, m to cm, km to m, kg to g and litres to millilitres.</p>		
8-10	15	102-111 76-81 86-101	Shape and space Reasoning about shapes Measures, including problems	Recognise reflective symmetry in regular polygons. Complete symmetrical patterns with two lines of symmetry at right angles. Reflect shapes in mirror parallel to one side. Recognise where shape will be after translation. Make and investigate a general statement about shapes. Use timetables. Know and use relationships between units of time. Use, read and write standard metric units of capacity, including abbreviations, and pint, gallon. Know and use relationships between them. Convert larger to smaller units of capacity, including gallons to pints. Suggest suitable units and equipment to estimate or measure capacity. Read measurements from scales. Use all four operations to solve measurement word problems, including time. Choose appropriate operations/calculation methods. Explain working.
11	5	40-47 48-51 82-85 70-75	Mental calculation strategies (+ and -) Pencil and paper procedures (+ and -) Money and 'real life' problems Making decisions, checking results, including using a calculator	Add several numbers. Use known facts and place value for mental addition and subtraction. Extend written methods addition and subtraction of integers less than 10 000, and decimals with up to two decimal places. Use all four operations to solve money or 'real life' word problems, including percentages. Choose appropriate operations/calculation methods. Explain working. Check using sums/differences of odd or even numbers.
12	5	16-21 76-81	Properties of numbers and number sequences Reasoning about numbers	Find all the pairs of factors of any number up to 100. Make general statements about odd and even numbers, including sums and differences. Explain a generalised relationship in words.
13	2		Assess and review	
Total	60			

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of +, -, × and ÷ facts)				
<p>Read and write whole numbers. Order positive and negative numbers; order fractions. Round whole numbers to nearest 10, 100 or 1000. Round decimals to nearest whole number or nearest tenth. Add/subtract any pair of two-digit numbers, including crossing 100; derive sums and differences, e.g. 760 ± 280. Know simple fractions as percentages; find simple percentages.</p>		<p>Find pairs with sum of 100; multiples of 50 with sum 1000; decimals with sum 1, 10. Recall multiplication and division facts to 10×10. Give pairs of factors for whole numbers to 100. Use doubling or halving (see Unit 2-3). Multiply or divide whole numbers by 10, 100 or 1000. Convert between km, m, cm, mm. Multiply mentally any two-digit number to 50 by a one-digit number.</p>		
Unit	Days	Pages	Topic	Objectives; children will be taught to:
1	3	2-15 70-71	Place value, ordering, rounding Using a calculator	Consolidate all previous work. Multiply and divide decimals by 10 or 100, and integers by 1000, and explain the effect. Develop calculator skills; use calculator effectively.
2-3	10	52-57 60-65 66-69 82-85 70-75	Understanding × and ÷ Mental calculation strategies (× and ÷) Pencil and paper procedures (× and ÷) Money and 'real life' problems Making decisions, checking results, including using a calculator	Consolidate all previous work. Understand and use relationships between the 4 operations, and the principles of the arithmetic laws. Use related facts and doubling or halving, e.g. halve an even number, double the other; multiply by 25, by 100, then ÷ 4. Approximate first. Use informal pencil and paper methods to support, record or explain × and ÷. Extend written methods to ThHTU × U and short multiplication involving decimals. Use all four operations to solve money or 'real life' word problems. Choose appropriate operations/calculation methods. Explain working. Check by estimating. Use inverse operation, including with a calculator.
4-5	10	22-33 26-27	Fractions, decimals and percentages Ratio and proportion	Consolidate all previous work. Change an improper fraction to a mixed number and vice versa. Recognise equivalent fractions. Reduce fractions by cancelling. Use decimal notation for tenths and hundredths; extend to thousandths for measurements. Know what each digit represents. Give a decimal lying between two others e.g. between 3.4 and 3.5. Understand percentage as the number of parts in every 100. Solve simple problems involving ratio and proportion.
6	8	112-117 70-71	Handling data Using a calculator	Consolidate all previous work. Use language of probability, including events with equally likely outcomes. Present and interpret grouped discrete data on a bar chart. Use prepared computer database to compare presentations of data. Find the mode and range of a set of data. Begin to find median and mean.
7	2		Assess and review	
<p>Read and write whole numbers in figures and words. Order positive and negative numbers; fractions; mixed decimals. Round whole numbers to nearest 10, 100 or 1000. Round decimals to nearest whole number or nearest tenth. Add/subtract any pair of two-digit numbers, including crossing 100; derive sums and differences e.g. 760 ± 380. Find pairs of numbers with a sum of 100; multiples of 50 with a sum of 1000; decimals with a sum of 0.1, 1 or 10.</p>		<p>Count on/back in steps of 25, 0.2, 0.25, 0.5... Recall multiplication/division facts to 10×10. Recall squares to 12×12. Give pairs of factors for whole numbers to 100. Use tests of divisibility. Double decimals e.g. 3.8×2, 0.76×2. Multiply or divide whole numbers by 10, 100 or 1000. Convert between km, m, cm, mm. Multiply mentally any two-digit number to 50 by a one-digit number. Know some fractions as percentages/decimals. Find simple percentages.</p>		
8-10	15	102-111 76-81 86-101	Shape and space Reasoning about shapes Measures, including problems	Consolidate all previous work. Classify quadrilaterals using side/angle properties. Read and plot co-ordinates in all four quadrants. Recognise where a shape will be after two translations. Solve shape puzzles. Explain methods and reasoning orally and in writing. Calculate perimeter of rectangles and simple compound shapes. Use, read and write standard metric units of length, abbreviations and relationships. Convert larger to smaller units of length, and vice versa. Know mile and km equivalents. Appreciate different times around the world. Suggest suitable units/equipment to estimate or measure length. Record estimates/measurements from scales to suitable degree of accuracy. Use all four operations to solve measurement word problems, including time. Choose appropriate operations/calculation methods. Explain working.
11	5	40-47 48-51 82-85 70-75	Mental calculation strategies (+ and -) Pencil and paper procedures (+ and -) Money and 'real life' problems Making decisions, checking results, including using a calculator	Consolidate all previous work. Find a difference by counting up, and add/subtract a multiple of 10, 100, 1000 and adjust. If appropriate, use informal pencil and paper methods. Extend written methods to column + and - of numbers involving decimals. Use all four operations to solve money or 'real life' word problems. Choose appropriate operations/calculation methods. Explain working. Check calculations using inverse operation, including with a calculator.
12	5	16-21 76-81	Properties of numbers and number sequences Reasoning about numbers	Recognise and extend number sequences such as square, triangular numbers. Count on/back in steps of 0.1, 0.2, 0.25, 0.5... and then back. Solve mathematical problems or puzzles. Recognise patterns, generalise.
13	2		Assess and review	
Total	60			

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of +, -, × and ÷ facts)	
<p>Read and write whole numbers in figures and words. Order positive and negative numbers; order fractions; mixed decimals. Round whole numbers to nearest 10, 100 or 1000. Round decimals to nearest whole number or nearest tenth. Add/subtract any pair of two-digit numbers, including crossing 100; derive sums and differences such as 7.6 ± 3.8. Find pairs of numbers with a sum of 100; multiples of 50 with a sum of 1000; decimals with a sum of 0.1, 1 or 10.</p>	<p>Count on/back in steps of 25, 0.2, 0.25, 0.5... Recall multiplication and division facts to 10×10. Recall squares. Give pairs of factors for whole numbers to 100. Use tests of divisibility. Find halves of decimals ending in an even digit, e.g. $3.8 \div 2$, $0.76 \div 2$. Multiply or divide whole numbers by 10, 100 or 1000. Convert between km and mm, kg and g, litres and millilitres. Multiply mentally any two-digit number to 50 by a one-digit number. Know some fractions as percentages/decimals. Find simple percentages.</p>

Unit	Days	Pages	Topic	Objectives; children will be taught to:
1	3	2-15 70-71	Place value, ordering, rounding Using a calculator	Find the difference between a positive and a negative integer, or two negative integers, in the context such as temperature or a number line. Order a set of positive and negative integers. Develop calculator skills and use a calculator effectively.
2-3	15	52-57 60-65 66-69 82-85 70-75	Understanding \times and \div Mental calculation strategies (\times and \div) Pencil and paper procedures (\times and \div) Money and 'real life' problems Making decisions, checking results, including using a calculator	Use brackets. Use factors. Use closely related facts. Partition, e.g. 87×6 , 3.4×3 . Extend written methods to short division of TU or HTU (mixed number answer) and of decimals. Use all four operations to solve word problems involving money or 'real life', including £ to foreign currency and vice versa. Choose appropriate operations/calculation methods. Explain working. Check with equivalent calculation, and tests of divisibility.
4	5	22-33 70-71	Fractions, decimals and percentages Using a calculator	Order fractions by converting to common denominator, and position them on a number line. Use fractions as 'operators'; find fractions of numbers and quantities. Order mixed set of numbers or measurements with up to 3 decimal places. Round a number with two decimal places to the nearest tenth or nearest whole number. Use a calculator effectively.
5	8	102-111 76-81	Shape and space Reasoning about shapes	Make shapes with increasing accuracy. Visualise 3-D shapes from 2-D drawings. Identify nets of closed cube. Recognise, estimate and order acute and obtuse angles. Use protractor to measure and draw acute/obtuse angles to 1° . Check angle sum of triangle is 180° . Calculate angles in triangle or around a point. Recognise where shape will be after 90° rotation about vertex. Recognise and explain patterns and relationships, generalise and predict.
6	2		Assess and review	

<p>Read and write whole numbers in figures and words. Order positive and negative numbers; order fractions; mixed decimals. Round whole numbers to nearest 10, 100 or 1000. Round decimals to nearest whole number or nearest tenth. Add/subtract any pair of two-digit numbers, including crossing 100; derive sums and differences such as 760 ± 380, 7.6 ± 3.8. Find pairs of numbers with a sum of 100; multiples of 50 with a sum of 1000; decimals with a sum of 0.1, 1 or 10.</p>	<p>Count on/back in steps of 25, 0.2, 0.25, 0.5... Recall multiplication and division facts to 10×10. Recall squares. Give pairs of factors for whole numbers to 100. Use tests of divisibility. Find halves of decimals ending in an even digit, e.g. $3.8 \div 2$, $0.76 \div 2$. Multiply or divide whole numbers by 10, 100 or 1000. Convert between km, m, cm, mm; kg and g; litres and millilitres; seconds and minutes. Multiply mentally any two-digit number to 50 by a one-digit number. Know some fractions as percentages/decimals. Find simple percentages.</p>
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7-8	5	86-101 112-117	Measures, including problems Handling data	Use formula for area of rectangle. Calculate the area of a shape formed from rectangles, including using a calculator with memory. Use, read and write standard metric units of mass, and abbreviations. Know relationships. Convert larger to smaller units, and vice versa. Know approximate metric equivalents for pounds (lb) and ounces (oz). Suggest suitable units and equipment to estimate or measure mass. Read measurements from scales. Use all four operations to solve measurement word problems. Choose appropriate operations/calculation methods. Explain working. Represent, extract and interpret data in a line graph (e.g. graph to convert miles to kilometres). Recognise that intermediate points have meaning.
9-10	10	40-47 48-51 82-85 70-75	Mental calculation strategies (+ and -) Pencil and paper procedures (+ and -) Money and 'real life' problems Making decisions, checking results, including using a calculator	Consolidate all previous work. Extend written methods to column + and - of numbers involving decimals. Use all four operations to solve word problems involving money or 'real life' or measurement. Choose appropriate operations/calculation methods. Explain working. Check by adding in reverse order, including with a calculator
11	5	22-31 76-81	Properties of numbers and number sequences Reasoning about numbers	Recognise multiples up to 10×10 . Find simple common multiples. Know tests of divisibility. Recognise primes to at least 20. Find prime factors. Investigate products of odd/even numbers. Make general statements about them and give examples. Solve number puzzles and explain methods and reasoning.
12	2		Assess and review	
Total	55			

EVERY DAY: Practise and develop oral and mental skills (e.g. counting, mental strategies, rapid recall of +, -, × and ÷ facts)	
<p>Read and write whole numbers in figures and words. Order positive and negative numbers; order fractions; mixed decimals. Round whole numbers to nearest 10, 100 or 1000. Round decimals to nearest whole number or nearest tenth. Add/subtract any pair of two-digit numbers, including crossing 100; derive sums and differences such as 7.6 ± 3.8, 760 ± 380. Find decimals with a sum of 0.1, 1 or 10. Add several single-digit numbers.</p>	<p>Count on/back in steps of 25, 0.2, 0.25, 0.5... Recall multiplication and division facts to 10×10. Recall squares, primes. Give pairs of factors for whole numbers to 100. Use tests of divisibility. Find doubles/halves of decimals, e.g. 7.9×2, $0.9 \div 2$, $0.72 \div 2$. Multiply or divide whole numbers by 10, 100 or 1000. Convert between km and mm; kg and g; litres and millilitres; hours, minutes, seconds. Multiply mentally any two-digit by a one-digit number, e.g. 3.6×4. Know some fractions as percentages/decimals. Find simple percentages.</p>

Unit	Days	Pages	Topic	Objectives; children will be taught to:
1	3	2-15 70-71	Place value, ordering, rounding Using a calculator	Use vocabulary of estimation and approximation. Consolidate rounding an integer to the nearest 10, 100 or 1000. Develop calculator skills and use a calculator effectively.
2-3	10	52-57 60-65 66-69 82-85 70-75	Understanding \times and \div Mental calculation strategies (\times and \div) Pencil and paper procedures (\times and \div) Money and 'real life' problems Making decisions, checking results, including using a calculator	Express a quotient as a fraction, or as a decimal rounded to 1 decimal place. Dividing £ and pence by a two-digit number to give £ and pence. Round up or down after division depending on the context. Use known facts and place value to multiply and divide mentally. Use relationship between multiplication and division. Multiply HTU by TU. Division HTU by TU (long division, whole number answer). Use all four operations to solve word problems involving money or 'real life', including finding percentages and VAT. Choose appropriate operations/calculation methods. Explain working. Check using products of odd/even numbers or doing the inverse calculation, including using a calculator.
4-5	10	22-33 26-27	Fractions, decimals and percentages Ratio and proportion	Begin to convert fractions to decimals using division. Use a calculator to compare two fractions. Express simple fractions as percentages. Find simple percentages of whole number quantities, including using a calculator. Solve simple problems involving ratio and direct proportion.
6	8	112-117 70-71	Handling data Using a calculator	Extract information from a simple frequency table, and convert the data to percentages, using a calculator where appropriate. Interpret a simple pie-chart, using fractions or percentages. Solve a problem by representing, extracting and interpreting data in frequency tables and bar charts with grouped discrete data.
7	2		Assess and review	

<p>Read and write whole numbers in figures and words. Order positive and negative numbers; order fractions; mixed decimals. Round whole numbers to nearest 10, 100 or 1000. Round decimals to nearest whole number or nearest tenth. Add/subtract any pair of two-digit numbers, including crossing 100; derive sums and differences such as 7.6 ± 3.8, 760 ± 380. Find decimals with a sum of 0.1, 1 or 10. Add several single-digit numbers.</p>	<p>Count on/back in steps of 25, 0.2, 0.25, 0.5... Recall multiplication and division facts to 10×10. Recall squares, primes. Give pairs of factors for whole numbers to 100. Use tests of divisibility. Find doubles/halves of decimals, e.g. 7.9×2, $0.9 \div 2$, $0.72 \div 2$. Multiply or divide whole numbers by 10, 100 or 1000. Convert between km and mm; kg and g; litres and millilitres; hours, minutes, seconds. Multiply mentally any two-digit by a one-digit number, e.g. 3.6×4. Know some fractions as percentages/decimals. Find simple percentages.</p>
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8-10	15	102-111 76-81 86-101	Shape and space Reasoning about shapes Measures, including problems	Recognise where a shape will be after reflection in a line not parallel to a side, or in two mirrors at 90° . Consolidate work on translations and rotations. Make and investigate a general statement about shapes. Use, read and write standard metric units of capacity, including abbreviations. Know and use relationships between them. Convert larger to smaller units of capacity, and vice versa. Know approximate metric equivalents for pint and gallon. Suggest suitable units and equipment to estimate or measure capacity. Read measurements from scales. Use all four operations to solve measurement word problems, including time. Choose appropriate operations/calculation methods. Explain working.
11	5	40-47 48-51 82-85 70-75	Mental calculation strategies (+ and -) Pencil and paper procedures (+ and -) Money and 'real life' problems Making decisions, checking results, including using a calculator	Use number facts and place value to add and subtract mentally. Extend written methods to column addition and subtraction of numbers involving decimals. Use all four operations to solve word problems involving money or 'real life', including percentages. Choose appropriate operations/calculation methods. Explain working. Check using sums/differences of odd/even numbers or doing the inverse calculation, including using a calculator.
12	5	16-21 76-81	Properties of numbers and number sequences Reasoning about numbers	Factorise numbers to 100 into prime factors. Investigate number sequences. Develop a generalised relationship in words; express it in a formula using symbols. Solve number puzzles and explain methods and reasoning.
13	2		Assess and review	
Total	60			