# Numeracy Overview of Long Term Planning

## Current subject leader: Chris Whale

- There will be a greater ( as reflected in the number of weeks of planning for these) focus on the Calculations Blocks in Blocks A, D & E. Some of the specific number objectives in Blocks B and C can be incorporated in Mental/Oral Planning in Blocks A,D & E. *Specific teaching of Shape, Measurements and Data Handling objectives can be in Weekly Blocks at appropriate times e.g. at Christmas re present wrapping, as well as in the Mental/Oral starters (see new planning sheet)

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| **Year 1** | **Block A - Counting, partitioning and calculating Units 1,2 &3 9 -10weeks appro x** | **Block B - Securing number facts, understanding shape • Units 1,2 & 3 3 weeks approx*** | **Block C Handling Data and Measures Units 1,2&3 3 weeks approx*** | **Block D: Calculating, measuring and understanding shape Units 1,2 & 3 9-10weeks approx** | **Block E Securing number facts, relationships and calculations Units 1,2 & 3 9-10 weeks approx** |
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| **Year 2** | **Block A - Counting, partitioning and calculating Units 1,2 &3 9 -10weeks appro x** | **Block B - Securing number facts, understanding shape • Units 1,2 & 3 3 weeks approx*** | **Block C Handling Data and Measures Units 1,2&3 3 weeks approx*** | **Block D: Calculating, measuring and understanding shape Units 1,2 & 3 9-11weeks approx** | **Block E Securing number facts, relationships and calculations Units 1,2 & 3 9-10 weeks approx** |
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| **Year 3** | **Block A - Counting, partitioning and calculating Units 1,2 &3 9 -10weeks appro x** | **Block B - Securing number facts, understanding shape • Units 1,2 & 3 3 weeks approx*** | **Block C Handling Data and Measures Units 1,2&3 3 weeks approx*** | **Block D: Calculating, measuring and understanding shape Units 1,2 & 3 9-12weeks approx** | **Block E Securing number facts, relationships and calculations Units 1,2 & 3 9-10 weeks approx** |
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| **Year 4** | **Block A - Counting, partitioning and calculating Units 1,2 &3 9 -10weeks appro x** | **Block B - Securing number facts, understanding shape • Units 1,2 & 3 3 weeks approx*** | **Block C Handling Data and Measures Units 1,2&3 3 weeks approx*** | **Block D: Calculating, measuring and understanding shape Units 1,2 & 3 9-13weeks approx** | **Block E Securing number facts, relationships and calculations Units 1,2 & 3 9-10 weeks approx** |
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| **Year 5** | **Block A - Counting, partitioning and calculating Units 1,2 &3 9 -10weeks appro x** | **Block B - Securing number facts, understanding shape • Units 1,2 & 3 3 weeks approx*** | **Block C Handling Data and Measures Units 1,2&3 3 weeks approx*** | **Block D: Calculating, measuring and understanding shape Units 1,2 & 3 9-14weeks approx** | **Block E Securing number facts, relationships and calculations Units 1,2 & 3 9-10 weeks approx** |
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| **Year 6** | **Block A - Counting, partitioning and calculating Units 1,2 &3 9 -10weeks appro x** | **Block B - Securing number facts, understanding shape • Units 1,2 & 3 3 weeks approx*** | **Block C Handling Data and Measures Units 1,2&3 3 weeks approx*** | **Block D: Calculating, measuring and understanding shape Units 1,2 & 3 9-15weeks approx** | **Block E Securing number facts, relationships and calculations Units 1,2 & 3 9-10 weeks approx** |

# Overview of Medium Term Planning - Maths

## Statutory National Curriculum Areas to be covered by the end of the year

| Year 1 Block A Unit 1 | |
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| **Outcomes & Assessment Judgement Based from Level Descriptors** | Count reliably at least 20 objects, recognising that when rearranged the number of objects stays the same; estimate a number of objects that can be checked by counting<br>Describe ways of solving puzzles and problems, explaining choices and decisions orally or using pictures .<br>Count reliably at least 20 objects, recognising that when rearranged the number of objects stays the same; estimate a number of objects that can be checked by counting<br>Compare and order numbers, using the related vocabulary; use the equals (=) sign<br>*Read and write numerals from 0 to 20, then beyond; use knowledge of place value to position these numbers on a number track and number line*<br>Say the number that is 1 more or less than any given number, and 10 more or less for multiples of 10<br>Relate addition to counting on; recognise that addition can be done in any order; use practical and informal written methods to support the addition of a one-digit number or a multiple of 10 to a one-digit or two-digit number<br>Understand subtraction as 'take away' and find a 'difference' by counting up; use practical and informal written methods to support the subtraction of a one-digit number from a one-digit or two-digit number and a multiple of 10 from a two-digit number<br>*Use the vocabulary related to addition and subtraction and symbols to describe and record addition and subtraction number sentences.* |
| **Year 1 Block A Unit 2** | |
| | Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money, for example to 'pay' and 'give change'.<br>Count reliably at least 20 objects, recognising that when rearranged the number of objects stays the same; estimate a number of objects that can be checked by counting .<br>Describe ways of solving puzzles and problems, explaining choices and decisions orally or using pictures .<br>Count reliably at least 20 objects, recognising that when rearranged the number of objects stays the same; estimate a number of objects that can be checked by counting<br>Compare and order numbers, using the related vocabulary; use the equals (=) sign<br>*Read and write numerals from 0 to 20, then beyond; use knowledge of place value to position these numbers on a number track and number line*<br>Say the number that is 1 more or less than any given number, and 10 more or less for multiples of 10<br>Relate addition to counting on; recognise that addition can be done in any order; use practical and informal written methods to support the addition of a one-digit number or a multiple of 10 to a one-digit or two-digit number<br>Understand subtraction as 'take away' and find a 'difference' by counting up; use practical and informal written methods to support the subtraction of a one-digit number from a one-digit or two-digit number and a multiple of 10 from a two-digit number.<br>*Use the vocabulary related to addition and subtraction and symbols to describe and record addition and subtraction number sentences.* |
| **Year 1 Block A Unit 3** | |
| **Outcomes & Assessment Judgement Based from Level Descriptors** | Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money, for example to 'pay' and 'give change'.<br>Count reliably at least 20 objects, recognising that when rearranged the number of objects stays the same; estimate a number of objects that can be checked by counting .<br>Describe ways of solving puzzles and problems, explaining choices and decisions orally or using pictures<br>Compare and order numbers, using the related vocabulary; use the equals (=) sign<br>*Read and write numerals from 0 to 20, then beyond; use knowledge of place value to position these numbers on a number track and number line*<br>Say the number that is 1 more or less than any given number, and 10 more or less for multiples of 10<br>Relate addition to counting on; recognise that addition can be done in any order; use practical and informal written methods to support the addition of a one-digit number or a multiple of 10 to a one-digit or two-digit number<br>Understand subtraction as 'take away' and find a 'difference' by counting up; use practical and informal written methods to support the subtraction of a one-digit number from a one-digit or two-digit number and a multiple of 10 from a two-digit number.<br>*Use the vocabulary related to addition and subtraction and symbols to describe and record addition and subtraction number sentences.* |

| Year 1 Block B Unit 1 | |
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| **Outcomes & Assessment Judgement Based from Level Descriptors** | • Describe simple patterns and relationships involving numbers or shapes; decide whether examples satisfy given conditions<br>• Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money, for example to 'pay' and 'give change'<br>• Count reliably at least 20 objects, recognising that when rearranged the number of objects stays the same; estimate a number of objects that can be checked by counting<br>• *Read and write numerals from 0 to 20, then beyond; use knowledge of place value to position these numbers on a number track and number line*<br>• Say the number that is 1 more or less than any given number, and 10 more or less for multiples of 10<br>• *Derive and recall all pairs of numbers with a total of 10 and addition facts for totals to at least 5; work out the corresponding subtraction facts*<br>• *Visualise and name common 2-D shapes and 3-D solids and describe their features; use them to make patterns, pictures and models* |
| **Year 1 Block B Unit 2** | |
| **Outcomes & Assessment Judgement Based from Level Descriptors will have progressed further and will:** | • Describe simple patterns and relationships involving numbers or shapes; decide whether examples satisfy given conditions<br>• Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money, for example to 'pay' and 'give change'<br>• Say the number that is 1 more or less than any given number, and 10 more or less for multiples of 10<br>• *Derive and recall all pairs of numbers with a total of 10 and addition facts for totals to at least 5; work out the corresponding subtraction facts*<br>• Recall the doubles of all numbers to at least 10<br>• *Visualise and name common 2-D shapes and 3-D solids and describe their features; use them to make patterns, pictures and models* |
| **Year 1 Block B Unit 3** | |
| **Outcomes & Assessment Judgement Based from Level Descriptors** | • Describe simple patterns and relationships involving numbers or shapes; decide whether examples satisfy given conditions<br>• Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money, for example to 'pay' and 'give change'<br>• *Derive and recall all pairs of numbers with a total of 10 and addition facts for totals to at least 5; work out the corresponding subtraction facts*<br>• Recall the doubles of all numbers to at least 10<br>• Relate addition to counting on; recognise that addition can be done in any order; use practical and informal written methods to support the addition of a one-digit number or a multiple of 10 to a one-digit or two-digit number<br>• Understand subtraction as 'take away' and find a 'difference' by counting up; use practical and informal written methods to support the subtraction of a one-digit number from a one-digit or two-digit number and a multiple of 10 from a two-digit number<br>• *Use the vocabulary related to addition and subtraction and symbols to describe and record addition and subtraction number sentences*<br>• *Visualise and name common 2-D shapes and 3-D solids and describe their features; use them to make patterns, pictures and models*<br>• Use diagrams to sort objects into groups according to a given criterion; suggest a different criterion for grouping the same objects |

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| **Year 1 Block C Unit 1** | |
| **:** | • Answer a question by selecting and using suitable equipment, and sorting information, shapes or objects; display results using tables and pictures<br>• Describe ways of solving puzzles and problems, explaining choices and decisions orally or using pictures<br>• *Answer a question by recording information in lists and tables; present outcomes using practical resources, pictures, block graphs or pictograms*<br>• Use diagrams to sort objects into groups according to a given criterion; suggest a different criterion for grouping the same objects<br>• *Estimate, measure, weigh and compare objects, choosing and using suitable uniform non-standard or standard units and measuring instruments (e.g. a lever balance, metre stick or measuring jug)* |
| **Year 1 Block C Unit 2** | |
| | • Answer a question by selecting and using suitable equipment, and sorting information, shapes or objects; display results using tables and pictures<br>• Describe ways of solving puzzles and problems, explaining choices and decisions orally or using pictures<br>• *Answer a question by recording information in lists and tables; present outcomes using practical resources, pictures, block graphs or pictograms*<br>• Use diagrams to sort objects into groups according to a given criterion; suggest a different criterion for grouping the same objects<br>• *Estimate, measure, weigh and compare objects, choosing and using suitable uniform non-standard or standard units and measuring instruments (e.g. a lever balance, metre stick or measuring jug)* |

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| **Year 1 Block C Unit 3** | |
| | • Answer a question by selecting and using suitable equipment, and sorting information, shapes or objects; display results using tables and pictures<br>• Describe ways of solving puzzles and problems, explaining choices and decisions orally or using pictures<br>• *Answer a question by recording information in lists and tables; present outcomes using practical resources, pictures, block graphs or pictograms*<br>• Use diagrams to sort objects into groups according to a given criterion; suggest a different criterion for grouping the same objects<br>• *Estimate, measure, weigh and compare objects, choosing and using suitable uniform non-standard or standard units and measuring instruments (e.g. a lever balance, metre stick or measuring jug)* |

| Year 1 Block D Unit 1 | |
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| | • Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money, for example to 'pay' and 'give change'<br>• Count reliably at least 20 objects, recognising that when rearranged the number of objects stays the same; estimate a number of objects that can be checked by counting<br>• Visualise and use everyday language to describe the position of objects and direction and distance when moving them, for example when placing or moving objects on a game board<br>• *Estimate, measure, weigh and compare objects, choosing and using suitable uniform non-standard or standard units and measuring instruments (e.g. a lever balance, metre stick or measuring jug)*<br>• Use vocabulary related to time; order days of the week and months; read the time to the hour and half hour |
| **Year 1 Block D Unit 2** | |
| | • Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money, for example to 'pay' and 'give change'<br>• Relate addition to counting on; recognise that addition can be done in any order; use practical and informal written methods to support the addition of a one-digit number or a multiple of 10 to a one-digit or two-digit number Understand subtraction as 'take away' and find a 'difference' by counting up; use practical and informal written methods to support the subtraction of a one-digit number from a one-digit or two-digit number and a multiple of 10 from a two-digit number<br>• Identify objects that turn about a point (e.g. scissors) or about a line (e.g. a door); recognise and make whole, half and quarter turns<br>• Visualise and use everyday language to describe the position of objects and direction and distance when moving them, for example when placing or moving objects on a game board<br>• *Estimate, measure, weigh and compare objects, choosing and using suitable uniform non-standard or standard units and measuring instruments (e.g. a lever balance, metre stick or measuring jug)* |
| **Year 1 Block D Unit 3** | |
| | • Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money, for example to 'pay' and 'give change'<br>• Relate addition to counting on; recognise that addition can be done in any order; use practical and informal written methods to support the addition of a one-digit number or a multiple of 10 to a one-digit or two-digit number<br>• Understand subtraction as 'take away' and find a 'difference' by counting up; use practical and informal written methods to support the subtraction of a one-digit number from a one-digit or two-digit number and a multiple of 10 from a two-digit number<br>• Identify objects that turn about a point (e.g. scissors) or about a line (e.g. a door); recognise and make whole, half and quarter turns<br>• Visualise and use everyday language to describe the position of objects and direction and distance when moving them, for example when placing or moving objects on a game board<br>*Estimate, measure, weigh and compare objects, choosing and using suitable uniform non-standard or standard units and measuring instruments (e.g. a lever balance, metre stick or measuring jug)* |

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| **Year 1 Block E Unit 1** | |
| | • Describe a puzzle or problem using numbers, practical materials and diagrams; use these to solve the problem and set the solution in the original context<br>• *Use the vocabulary related to addition and subtraction and symbols to describe and record addition and subtraction number sentences*<br>• Count on or back in ones, twos, fives and tens and use this knowledge to derive the multiples of 2, 5 and 10 to the tenth multiple<br>• Recall the doubles of all numbers to at least 10<br>• Use the vocabulary of halves and quarters in context |
| **Year 1 Block E Unit 2** | |
| | • Describe a puzzle or problem using numbers, practical materials and diagrams; use these to solve the problem and set the solution in the original context<br>• Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money, for example to 'pay' and 'give change'<br>• *Use the vocabulary related to addition and subtraction and symbols to describe and record addition and subtraction number sentences*<br>• Count on or back in ones, twos, fives and tens and use this knowledge to derive the multiples of 2, 5 and 10 to the tenth multiple<br>• Solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups<br>• Recall the doubles of all numbers to at least 10<br>• Use the vocabulary of halves and quarters in context |
| **Year 1 Block E Unit 3** | |
| | • Describe a puzzle or problem using numbers, practical materials and diagrams; use these to solve the problem and set the solution in the original context<br>• Describe simple patterns and relationships involving numbers or shapes; decide whether examples satisfy given conditions<br>• Count on or back in ones, twos, fives and tens and use this knowledge to derive the multiples of 2, 5 and 10 to the tenth multiple<br>• Solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups<br>• Recall the doubles of all numbers to at least 10<br>• Use the vocabulary of halves and quarters in context |
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# Overview of Medium Term Planning - Maths

## Statutory National Curriculum Areas to be covered by the end of the year

| Year 2 Block A Unit 1 | |
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| | • Present solutions to puzzles and problems in an organised way; explain decisions, methods and results in pictorial, spoken or written form, using mathematical language and number sentences<br>• Read and write two-digit and three-digit numbers in figures and words; describe and extend number sequences and recognise odd and even numbers<br>• *Count up to 100 objects by grouping them and counting in tens, fives or twos; explain what each digit in a two-digit number represents, including numbers where 0 is a place holder; partition two-digit numbers in different ways, including into multiples of 10 and 1*<br>• Order two-digit numbers and position them on a number line; use the greater than > and less than < signs<br>• Estimate a number of objects; round two-digit numbers to the nearest 10<br>• *Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number; use practical and informal written methods to add and subtract two-digit numbers*<br>• Understand that subtraction is the inverse of addition and vice versa; use this to derive and record related addition and subtraction number sentences |
| **Year 2 Block A Unit 2** | |
| | • Present solutions to puzzles and problems in an organised way; explain decisions, methods and results in pictorial, spoken or written form, using mathematical language and number sentences<br>• Read and write two-digit and three-digit numbers in figures and words; describe and extend number sequences and recognise odd and even numbers<br>• *Count up to 100 objects by grouping them and counting in tens, fives or twos; explain what each digit in a two-digit number represents, including numbers where 0 is a place holder; partition two-digit numbers in different ways, including into multiples of 10 and 1*<br>• *Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number; use practical and informal written methods to add and subtract two-digit numbers*<br>• *Use the symbols +, -, ×, ÷ and = to record and interpret number sentences involving all four operations; calculate the value of an unknown in a number sentence (e.g. □ ÷ 2 = 6, 30- □ = 24)* |
| **Year 2 Block A Unit 3** | |
| | • Present solutions to puzzles and problems in an organised way; explain decisions, methods and results in pictorial, spoken or written form, using mathematical language and number sentences<br>• Read and write two-digit and three-digit numbers in figures and words; describe and extend number sequences and recognise odd and even numbers<br>• *Count up to 100 objects by grouping them and counting in tens, fives or twos; explain what each digit in a two-digit number represents, including numbers where 0 is a place holder; partition two-digit numbers in different ways, including into multiples of 10 and 1*<br>• Order two-digit numbers and position them on a number line; use the greater than > and less than < signs<br>• Estimate a number of objects; round two-digit numbers to the nearest 10<br>• *Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number; use practical and informal written methods to add and subtract two-digit numbers*<br>• Understand that subtraction is the inverse of addition and vice versa; use this to derive and record related addition and subtraction number sentences<br>• *Use the symbols +, -, ×, ÷ and = to record and interpret number sentences involving all four operations; calculate the value of an unknown in a number sentence (e.g. □ ÷ 2 = 6, 30- □ = 24)* |

| | Year 2 Block B Unit 1 |
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| | • Describe patterns and relationships involving numbers or shapes, make predictions and test these with examples<br>• Solve problems involving addition, subtraction, multiplication or division in contexts of numbers, measures or pounds and pence<br>• *Derive and recall all addition and subtraction facts for each number to at least 10, all pairs with totals to 20 and all pairs of multiples of 10 with totals up to 100*<br>• Understand that halving is the inverse of doubling and derive and recall doubles of all numbers to 20, and the corresponding halves<br>• Derive and recall multiplication facts for the 2, 5 and 10 times-tables and the related division facts; recognise multiples of 2, 5 and 10<br>• Use knowledge of number facts and operations to estimate and check answers to calculations<br>• Identify reflective symmetry in patterns and 2-D shapes and draw lines of symmetry in shapes |
| **Year 2 Block B Unit 2** | |
| | • Describe patterns and relationships involving numbers or shapes, make predictions and test these with examples<br>• Solve problems involving addition, subtraction, multiplication or division in contexts of numbers, measures or pounds and pence<br>• *Derive and recall all addition and subtraction facts for each number to at least 10, all pairs with totals to 20 and all pairs of multiples of 10 with totals up to 100*<br>• Derive and recall multiplication facts for the 2, 5 and 10 times-tables and the related division facts; recognise multiples of 2, 5 and 10<br>• Read and write two-digit and three-digit numbers in figures and words; describe and extend number sequences and recognise odd and even numbers<br>• *Visualise common 2-D shapes and 3-D solids; identify shapes from pictures of them in different positions and orientations; sort, make and describe shapes, referring to their properties*<br>• Identify reflective symmetry in patterns and 2-D shapes and draw lines of symmetry in shapes |
| **Year 2 Block B Unit 3** | |
| | • Describe patterns and relationships involving numbers or shapes, make predictions and test these with examples<br>• Solve problems involving addition, subtraction, multiplication or division in contexts of numbers, measures or pounds and pence<br>• *Derive and recall all addition and subtraction facts for each number to at least 10, all pairs with totals to 20 and all pairs of multiples of 10 with totals up to 100*<br>• Understand that halving is the inverse of doubling and derive and recall doubles of all numbers to 20, and the corresponding halves<br>• Derive and recall multiplication facts for the 2, 5 and 10 times-tables and the related division facts; recognise multiples of 2, 5 and 10<br>• Use knowledge of number facts and operations to estimate and check answers to calculations<br>• *Visualise common 2-D shapes and 3-D solids; identify shapes from pictures of them in different positions and orientations; sort, make and describe shapes, referring to their properties* |

| Year 2 Block C Unit 1 | |
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| | • Follow a line of enquiry; answer questions by choosing and using suitable equipment and selecting, organising and presenting information in lists, tables and simple diagrams<br>• Answer a question by collecting and recording data in lists and tables; represent the data as block graphs or pictograms to show results; use ICT to organise and present data<br>• *Use lists, tables and diagrams to sort objects; explain choices using appropriate language, including 'not'*<br>• Estimate, compare and measure lengths, weights and capacities, choosing and using standard units (m, cm, kg, litre) and suitable measuring instruments<br>• Read the numbered divisions on a scale and interpret the divisions between them (e.g. on a scale from 0 to 25 with intervals of 1 shown but only the divisions 0, 5, 10, 15 and 20 numbered); use a ruler to draw and measure lines to the nearest centimetre |
| **Year 2 Block C Unit 2** | |
| | • Follow a line of enquiry; answer questions by choosing and using suitable equipment and selecting, organising and presenting information in lists, tables and simple diagrams<br>• Answer a question by collecting and recording data in lists and tables; represent the data as block graphs or pictograms to show results; use ICT to organise and present data<br>• *Use lists, tables and diagrams to sort objects; explain choices using appropriate language, including 'not'*<br>• Estimate, compare and measure lengths, weights and capacities, choosing and using standard units (m, cm, kg, litre) and suitable measuring instruments<br>• Read the numbered divisions on a scale and interpret the divisions between them (e.g. on a scale from 0 to 25 with intervals of 1 shown but only the divisions 0, 5, 10, 15 and 20 numbered); use a ruler to draw and measure lines to the nearest centimetre |
| **Year 2 Block C Unit 3** | |
| | • Follow a line of enquiry; answer questions by choosing and using suitable equipment and selecting, organising and presenting information in lists, tables and simple diagrams<br>• Answer a question by collecting and recording data in lists and tables; represent the data as block graphs or pictograms to show results; use ICT to organise and present data<br>• *Use lists, tables and diagrams to sort objects; explain choices using appropriate language, including 'not'*<br>• Estimate, compare and measure lengths, weights and capacities, choosing and using standard units (m, cm, kg, litre) and suitable measuring instruments<br>• Read the numbered divisions on a scale and interpret the divisions between them (e.g. on a scale from 0 to 25 with intervals of 1 shown but only the divisions 0, 5, 10, 15 and 20 numbered); use a ruler to draw and measure lines to the nearest centimetre |

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| **Year 2 Block D Unit 1** | |
| | • Solve problems involving addition, subtraction, multiplication or division in contexts of numbers, measures or pounds and pence<br>• *Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number; use practical and informal written methods to add and subtract two-digit numbers*<br>• Estimate, compare and measure lengths, weights and capacities, choosing and using standard units (m, cm, kg, litre) and suitable measuring instruments<br>• Read the numbered divisions on a scale, and interpret the divisions between them (e.g. on a scale from 0 to 25 with intervals of 1 shown but only the divisions 0, 5, 10, 15 and 20 numbered); use a ruler to draw and measure lines to the nearest centimetre<br>• *Use units of time (seconds, minutes, hours, days) and know the relationships between them; read the time to the quarter hour; identify time intervals, including those that cross the hour* |
| **Year 2 Block D Unit 2** | |
| | • Solve problems involving addition, subtraction, multiplication or division in contexts of numbers, measures or pounds and pence<br>• *Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number; use practical and informal written methods to add and subtract two-digit numbers*<br>• Estimate, compare and measure lengths, weights and capacities, choosing and using standard units (m, cm, kg, litre) and suitable measuring instruments<br>• Read the numbered divisions on a scale, and interpret the divisions between them (e.g. on a scale from 0 to 25 with intervals of 1 shown but only the divisions 0, 5, 10, 15 and 20 numbered); use a ruler to draw and measure lines to the nearest centimetre<br>• *Use units of time (seconds, minutes, hours, days) and know the relationships between them; read the time to the quarter hour; identify time intervals, including those that cross the hour*<br>• Recognise and use whole, half and quarter turns, both clockwise and anticlockwise; know that a right angle represents a quarter turn<br>• Follow and give instructions involving position, direction and movement |
| **Year 2 Block D Unit 3** | |
| | • Solve problems involving addition, subtraction, multiplication or division in contexts of numbers, measures or pounds and pence<br>• *Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number; use practical and informal written methods to add and subtract two-digit numbers*<br>• Estimate, compare and measure lengths, weights and capacities, choosing and using standard units (m, cm, kg, litre) and suitable measuring instruments<br>• Read the numbered divisions on a scale, and interpret the divisions between them (e.g. on a scale from 0 to 25 with intervals of 1 shown but only the divisions 0, 5, 10, 15 and 20 numbered); use a ruler to draw and measure lines to the nearest centimetre<br>• *Use units of time (seconds, minutes, hours, days) and know the relationships between them; read the time to the quarter hour; identify time intervals, including those that cross the hour*<br>• Recognise and use whole, half and quarter turns, both clockwise and anticlockwise; know that a right angle represents a quarter turn |

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| **Year 2 Block E Unit 1** | |
| | • Identify and record the information or calculation needed to solve a puzzle or problem; carry out the steps or calculations and check the solution in the context of the problem<br>• Represent repeated addition and arrays as multiplication, and sharing and repeated subtraction (grouping) as division; use practical and informal written methods and related vocabulary to support multiplication and division, including calculations with remainders<br>• *Use the symbols +, -, ×, ÷ and = to record and interpret number sentences involving all four operations; calculate the value of an unknown in a number sentence (e.g. □ ÷ 2 = 6, 30 - □ = 24)*<br>• Understand that halving is the inverse of doubling and derive and recall doubles of all numbers to 20, and the corresponding halves<br>• Derive and recall multiplication facts for the 2, 5 and 10 times-tables and the related division facts; recognise multiples of 2, 5 and 10<br>• Find one half, one quarter and three quarters of shapes and sets of objects |
| **Year 2 Block E Unit 2** | |
| | • Identify and record the information or calculation needed to solve a puzzle or problem; carry out the steps or calculations and check the solution in the context of the problem<br>• Solve problems involving addition, subtraction, multiplication or division in contexts of numbers, measures or pounds and pence<br>• Represent repeated addition and arrays as multiplication, and sharing and repeated subtraction (grouping) as division; use practical and informal written methods and related vocabulary to support multiplication and division, including calculations with remainders<br>• *Use the symbols +, -, ×, ÷ and = to record and interpret number sentences involving all four operations; calculate the value of an unknown in a number sentence (e.g. □ ÷ 2 = 6, 30 - □ = 24)*<br>• Understand that halving is the inverse of doubling and derive and recall doubles of all numbers to 20, and the corresponding halves<br>• Derive and recall multiplication facts for the 2, 5 and 10 times-tables and the related division facts; recognise multiples of 2, 5 and 10<br>• Find one half, one quarter and three quarters of shapes and sets of objects |
| **Year 2 Block E Unit 3** | |
| | • Identify and record the information or calculation needed to solve a puzzle or problem; carry out the steps or calculations and check the solution in the context of the problem<br>• Present solutions to puzzles and problems in an organised way; explain decisions, methods and results in pictorial, spoken or written form, using mathematical language and number sentences<br>• Represent repeated addition and arrays as multiplication, and sharing and repeated subtraction (grouping) as division; use practical and informal written methods and related vocabulary to support multiplication and division, including calculations with remainders<br>• *Use the symbols +, -, ×, ÷ and = to record and interpret number sentences involving all four operations; calculate the value of an unknown in a number sentence (e.g. □ ÷ 2 = 6, 30 - □ = 24)*<br>• Understand that halving is the inverse of doubling and derive and recall doubles of all numbers to 20, and the corresponding halves<br>• Derive and recall multiplication facts for the 2, 5 and 10 times-tables and the related division facts; recognise multiples of 2, 5 and 10<br>• Find one half, one quarter and three quarters of shapes and sets of objects |
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# Overview of Medium Term Planning - Maths

## Statutory National Curriculum Areas to be covered by the end of the year

| Year 3 Block A Unit 1 | |
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| | • Describe and explain methods, choices and solutions to puzzles and problems, orally and in writing, using pictures and diagrams<br>• Read, write and order whole numbers to at least 1000 and position them on a number line; count on from and back to zero in single-digit steps or multiples of 10<br>• *Partition three-digit numbers into multiples of 100, 10 and 1 in different ways*<br>• *Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100*<br>• *Add or subtract mentally combinations of one-digit and two-digit numbers* |
| **Year 3 Block A Unit 2** | |
| | • Describe and explain methods, choices and solutions to puzzles and problems, orally and in writing, using pictures and diagrams<br>• *Partition three-digit numbers into multiples of 100, 10 and 1 in different ways*<br>• Round two-digit or three-digit numbers to the nearest 10 or 100 and give estimates for their sums and differences<br>• *Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100*<br>• *Add or subtract mentally combinations of one-digit and two-digit numbers*<br>• Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000<br>• Multiply one-digit and two-digit numbers by 10 or 100, and describe the effect |
| **Year 3 Block A Unit 3** | |
| | • Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations<br>• Round two-digit or three-digit numbers to the nearest 10 or 100 and give estimates for their sums and differences<br>• *Add or subtract mentally combinations of one-digit and two-digit numbers*<br>• Develop and use written methods to record, support or explain addition and subtraction of two-digit and three-digit numbers<br>• Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000<br>• Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13×3, 50÷4); round remainders up or down, depending on the context |

| Year 3 Block B Unit 1 | |
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| | • Represent the information in a puzzle or problem using numbers, images or diagrams; use these to find a solution and present it in context, where appropriate using £p notation or units of measure<br>• Identify patterns and relationships involving numbers or shapes, and use these to solve problems<br>• *Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100*<br>• Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000<br>• Use knowledge of number operations and corresponding inverses, including doubling and halving, to estimate and check calculations<br>• Relate 2-D shapes and 3-D solids to drawings of them; describe, visualise, classify, draw and make the shapes |
| **Year 3 Block B Unit 2** | |
| | • Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations<br>• Represent the information in a puzzle or problem using numbers, images or diagrams; use these to find a solution and present it in context, where appropriate using £p notation or units of measure<br>• Identify patterns and relationships involving numbers or shapes, and use these to solve problems<br>• Read and write proper fractions (e.g. $^3/_7$, $^9/_{10}$), interpreting the denominator as the parts of a whole and the numerator as the number of parts; identify and estimate fractions of shapes; use diagrams to compare fractions and establish equivalents<br>• *Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100*<br>• Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000<br>• Relate 2-D shapes and 3-D solids to drawings of them; describe, visualise, classify, draw and make the shapes |
| **Year 3 Block B Unit 3** | |
| | • Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations<br>• Represent the information in a puzzle or problem using numbers, images or diagrams; use these to find a solution and present it in context, where appropriate using £p notation or units of measure<br>• Identify patterns and relationships involving numbers or shapes, and use these to solve problems<br>• Read and write proper fractions (e.g. $^3/_7$, $^9/_{10}$), interpreting the denominator as the parts of a whole and the numerator as the number of parts; identify and estimate fractions of shapes; use diagrams to compare fractions and establish equivalents<br>• *Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100*<br>• Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000<br>• Use knowledge of number operations and corresponding inverses, including doubling and halving, to estimate and check calculations<br>• Relate 2-D shapes and 3-D solids to drawings of them; describe, visualise, classify, draw and make the shapes<br>• Use a set-square to draw right angles and to identify right angles in 2-D shapes; compare angles with a right angle; recognise that a straight line is equivalent to two right angles |

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| **Year 3 Block C Unit 1** | |
| | • Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information<br>• Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure and record measurements<br>• *Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy*<br>• Answer a question by collecting, organising and interpreting data; use tally charts, frequency tables, pictograms and bar charts to represent results and illustrate observations; use ICT to create a simple bar chart<br>• *Use Venn diagrams or Carroll diagrams to sort data and objects using more than one criterion* |
| **Year 3 Block C Unit 2** | |
| | • Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information<br>• Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure and record measurements<br>• *Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy*<br>• Read the time on a 12-hour digital clock and to the nearest 5 minutes on an analogue clock; calculate time intervals and find start or end times for a given time interval<br>• Answer a question by collecting, organising and interpreting data; use tally charts, frequency tables, pictograms and bar charts to represent results and illustrate observations; use ICT to create a simple bar chart<br>• *Use Venn diagrams or Carroll diagrams to sort data and objects using more than one criterion* |
| **Year 3 Block C Unit 3** | |
| | • Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information<br>• Describe and explain methods, choices and solutions to puzzles and problems, orally and in writing, using pictures and diagrams<br>• Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure and record measurements<br>• *Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy*<br>• Answer a question by collecting, organising and interpreting data; use tally charts, frequency tables, pictograms and bar charts to represent results and illustrate observations; use ICT to create a simple bar chart |

| Year 3 Block D Unit 1 | |
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| | • Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations<br>• *Add or subtract mentally combinations of one-digit and two-digit numbers*<br>• Find unit fractions of numbers and quantities (e.g. $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{1}{6}$ of 12 litres)<br>• Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure and record measurements<br>• *Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy* Read the time on a 12-hour digital clock and to the nearest 5 minutes on an analogue clock; calculate time intervals and find start or end times for a given time interval |
| **Year 3 Block D Unit 2** | |
| | • Represent the information in a puzzle or problem using numbers, images or diagrams; use these to find a solution and present it in context, where appropriate using £.p notation or units of measure<br>• *Add or subtract mentally combinations of one-digit and two-digit numbers*<br>• Develop and use written methods to record, support or explain addition and subtraction of two-digit and three-digit numbers<br>• Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷4); round remainders up or down, depending on the context<br>• Find unit fractions of numbers and quantities (e.g. $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{1}{6}$ of 12 litres)<br>• *Draw and complete shapes with reflective symmetry; draw the reflection of a shape in a mirror line along one side*<br>• Read and record the vocabulary of position, direction and movement, using the four compass directions to describe movement about a grid<br>• Use a set-square to draw right angles and to identify right angles in 2-D shapes; compare angles with a right angle; recognise that a straight line is equivalent to two right angles<br>• Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure and record measurements |
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| **Year 3 Block D Unit 3** | |
| | • Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations<br>• Use knowledge of number operations and corresponding inverses, including doubling and halving, to estimate and check calculations<br>• Develop and use written methods to record, support or explain addition and subtraction of two-digit and three-digit numbers<br>• Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷4); round remainders up or down, depending on the context<br>• Understand that division is the inverse of multiplication and vice versa; use this to derive and record related multiplication and division number sentences<br>• Use a set-square to draw right angles and to identify right angles in 2-D shapes; compare angles with a right angle; recognise that a straight line is equivalent to two right angles<br>• *Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy*<br>• Read the time on a 12-hour digital clock and to the nearest 5 minutes on an analogue clock; calculate time intervals and find start or end times for a given time interval |

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| **Year 3 Block E Unit 1** | |
| | • Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information<br>• Identify patterns and relationships involving numbers or shapes, and use these to solve problems<br>• *Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100*<br>• Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000<br>• Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷ 4); round remainders up or down, depending on the context Find unit fractions of numbers and quantities (e.g. $^1/_2$, $^1/_3$, $^1/_4$ and $^1/_6$ of 12 litres) |
| **Year 3 Block E Unit 2** | |
| | • Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations<br>• Read and write proper fractions (e.g. $^3/_7$, $^9/_{10}$), interpreting the denominator as the parts of a whole and the numerator as the number of parts; identify and estimate fractions of shapes; use diagrams to compare fractions and establish equivalents<br>• Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000<br>• Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷ 4); round remainders up or down, depending on the context<br>• Understand that division is the inverse of multiplication and vice versa; use this to derive and record related multiplication and division number sentences<br>• Find unit fractions of numbers and quantities (e.g. $^1/_2$, $^1/_3$, $^1/_4$ and $^1/_6$ of 12 litres) |
| **Year 3 Block E Unit 3** | |
| | • Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations<br>• Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information<br>• Identify patterns and relationships involving numbers or shapes, and use these to solve problems<br>• *Partition three-digit numbers into multiples of 100, 10 and 1 in different way*<br>• Read and write proper fractions (e.g. $^3/_7$, $^9/_{10}$), interpreting the denominator as the parts of a whole and the numerator as the number of parts; identify and estimate fractions of shapes; use diagrams to compare fractions and establish equivalents<br>• Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000<br>• Develop and use written methods to record, support or explain addition and subtraction of two-digit and three-digit numbers<br>• Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷ 4); round remainders up or down, depending on the context<br>• Find unit fractions of numbers and quantities (e.g. $^1/_2$, $^1/_3$, $^1/_4$ and $^1/_6$ of 12 litres) |
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# Overview of Medium Term Planning - Maths

## Statutory National Curriculum Areas to be covered by the end of the year

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| **Year 4 Block A Unit 1** | |
| | • Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols<br>• Partition, round and order four-digit whole numbers; use positive and negative numbers in context and position them on a number line; state inequalities using the symbols < and > (e.g. -3 > -5, -1 < +1)<br>• Recognise and continue number sequences formed by counting on or back in steps of constant size<br>• Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 or 1000<br>• *Add or subtract mentally pairs of two-digit whole numbers (e.g. 47 + 58, 91 − 35)*<br>• *Derive and recall multiplication facts up to 10 × 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple*<br>• Multiply and divide numbers to 1000 by 10 and then 100 (whole-number answers), understanding the effect; relate to scaling up or down<br>• Identify the doubles of two-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves<br>• Use a calculator to carry out one-step and two-step calculations involving all four operations; recognise negative numbers in the display, correct mistaken entries and interpret the display correctly in the context of money<br>• Use knowledge of rounding, number operations and inverses to estimate and check calculations |
| **Year 4 Block A Unit 2** | |
| | • Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols<br>• Recognise and continue number sequences formed by counting on or back in steps of constant size<br>• Use decimal notation for tenths and hundredths and partition decimals; relate the notation to money and measurement; position one-place and two-place decimals on a number line<br>• *Add or subtract mentally pairs of two-digit whole numbers (e.g. 47 + 58, 91 − 35)*<br>• Refine and use efficient written methods to add and subtract two-digit and three-digit whole numbers and £.p<br>• *Derive and recall multiplication facts up to 10 × 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple*<br>• Multiply and divide numbers to 1000 by 10 and then 100 (whole-number answers), understanding the effect; relate to scaling up or down<br>• *Develop and use written methods to record, support and explain multiplication and division of two-digit numbers by a one-digit number, including division with remainders (e.g. 15 × 9, 98 ÷ 6)*<br>• Use knowledge of rounding, number operations and inverses to estimate and check calculations |
| **Year 4 Block A Unit 3** | |
| | • Solve one-step and two-step problems involving numbers, money or measures, including time; choose and carry out appropriate calculations, using calculator methods where appropriate<br>• Partition, round and order four-digit whole numbers; use positive and negative numbers in context and position them on a number line; state inequalities using the symbols < and > (e.g. -3 > -5, -1 < +1)<br>• Recognise and continue number sequences formed by counting on or back in steps of constant size Use decimal notation for tenths and hundredths and partition decimals; relate the notation to money and measurement; position one-place and two-place decimals on a number line<br>• *Add or subtract mentally pairs of two-digit whole numbers (e.g. 47 + 58, 91 − 35)*<br>• Refine and use efficient written methods to add and subtract two-digit and three-digit whole numbers and £.p<br>• *Derive and recall multiplication facts up to 10 × 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple*<br>• *Develop and use written methods to record, support and explain multiplication and division of two-digit numbers by a one-digit number, including division with remainders (e.g. 15 × 9, 98 ÷ 6)*<br>• Use a calculator to carry out one-step and two-step calculations involving all four operations; recognise negative numbers in the display, correct mistaken entries and interpret the display correctly in the context of money<br>• Use knowledge of rounding, number operations and inverses to estimate and check calculations |

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| **Year 4 Block B Unit 1** | |
| | • Identify and use patterns, relationships and properties of numbers or shapes; investigate a statement involving numbers and test it with examples<br>• Solve one-step and two-step problems involving numbers, money or measures, including time; choose and carry out appropriate calculations, using calculator methods where appropriate<br>• Use knowledge of rounding, number operations and inverses to estimate and check calculations<br>• Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols<br>• Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 or 1000<br>• *Derive and recall multiplication facts up to 10 × 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple*<br>• Draw polygons and classify them by identifying their properties, including their line symmetry<br>• Visualise 3-D objects from 2-D drawings; make nets of common solids |
| **Year 4 Block B Unit 2** | |
| | • Identify and use patterns, relationships and properties of numbers or shapes; investigate a statement involving numbers and test it with examples<br>• Use knowledge of rounding, number operations and inverses to estimate and check calculations<br>• Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols<br>• Identify the doubles of two-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves<br>• *Derive and recall multiplication facts up to 10 × 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple*<br>• Draw polygons and classify them by identifying their properties, including their line symmetry Visualise 3-D objects from 2-D drawings; make nets of common solids |
| **Year 4 Block B Unit 3** | |
| | • Identify and use patterns, relationships and properties of numbers or shapes; investigate a statement involving numbers and test it with examples<br>• Solve one-step and two-step problems involving numbers, money or measures, including time; choose and carry out appropriate calculations, using calculator methods where appropriate<br>• Use knowledge of rounding, number operations and inverses to estimate and check calculations<br>• Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols<br>• Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 or 1000<br>• Identify the doubles of two-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves<br>• *Derive and recall multiplication facts up to 10 × 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple*<br>• Draw polygons and classify them by identifying their properties, including their line symmetry<br>• Visualise 3-D objects from 2-D drawings; make nets of common solids |

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| **Year 4 Block C Unit 1** | |
| | • Suggest a line of enquiry and the strategy needed to follow it; collect, organise and interpret selected information to find answers<br>• *Answer a question by identifying what data to collect; organise, present, analyse and interpret the data in tables, diagrams, tally charts, pictograms and bar charts, using ICT where appropriate*<br>• Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols<br>• *Choose and use standard metric units and their abbreviations when estimating, measuring and recording length, weight and capacity; know the meaning of 'kilo', 'centi' and 'milli' and, where appropriate, use decimal notation to record measurements (e.g. 1.3 m or 0.6 kg)*<br>• Interpret intervals and divisions on partially numbered scales and record readings accurately,where appropriate to the nearest tenth of a unit |
| **Year 4 Block C Unit 2** | |
| | • Suggest a line of enquiry and the strategy needed to follow it; collect, organise and interpret selected information to find answers<br>• *Answer a question by identifying what data to collect; organise, present, analyse and interpret the data in tables, diagrams, tally charts, pictograms and bar charts, using ICT where appropriate*<br>• Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols<br>• *Choose and use standard metric units and their abbreviations when estimating, measuring and recording length, weight and capacity; know the meaning of 'kilo', 'centi' and 'milli' and, where appropriate, use decimal notation to record measurements (e.g. 1.3 m or 0.6 kg)* Interpret intervals and divisions on partially numbered scales and record readings accurately,where appropriate to the nearest tenth of a unit<br>• Compare the impact of representations where scales have intervals of differing step size |
| **Year 4 Block C Unit 3** | |
| | • Suggest a line of enquiry and the strategy needed to follow it; collect, organise and interpret selected information to find answers<br>• *Answer a question by identifying what data to collect; organise, present, analyse and interpret the data in tables, diagrams, tally charts, pictograms and bar charts, using ICT where appropriate*<br>• Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols<br>• *Choose and use standard metric units and their abbreviations when estimating, measuring and recording length, weight and capacity; know the meaning of 'kilo', 'centi' and 'milli' and, where appropriate, use decimal notation to record measurements (e.g. 1.3 m or 0.6 kg)* Interpret intervals and divisions on partially numbered scales and record readings accurately,where appropriate to the nearest tenth of a unit<br>• Compare the impact of representations where scales have intervals of differing step size |

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| **Year 4 Block D Unit 1** | |
| | • Solve one-step and two-step problems involving numbers, money or measures, including time; choose and carry out appropriate calculations, using calculator methods where appropriate<br>• *Add or subtract mentally pairs of two-digit whole numbers (e.g. 47 + 58, 91 − 35)*<br>• *Choose and use standard metric units and their abbreviations when estimating, measuring and recording length, weight and capacity; know the meaning of 'kilo', 'centi' and 'milli' and, where appropriate, use decimal notation to record measurements (e.g. 1.3 m or 0.6 kg)*<br>• Interpret intervals and divisions on partially numbered scales and record readings accurately, where appropriate to the nearest tenth of a unit<br>• Read time to the nearest minute; use am, pm and 12-hour clock notation; choose units of time to measure time intervals; calculate time intervals from clocks and timetables<br>• Recognise horizontal and vertical lines; use the eight compass points to describe direction; describe and identify the position of a square on a grid of squares |
| **Year 4 Block D Unit 2** | |
| | • Recognise horizontal and vertical lines; use the eight compass points to describe direction; describe and identify the position of a square on a grid of squares<br>• Refine and use efficient written methods to add and subtract two-digit and three-digit whole numbers and £.p<br>• *Derive and recall multiplication facts up to 10 × 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple*<br>• *Develop and use written methods to record, support and explain multiplication and division of two-digit numbers by a one-digit number, including division with remainders (e.g. 15 × 9, 98 ÷ 6)*<br>• Use decimal notation for tenths and hundredths and partition decimals; relate the notation to money and measurement; position one-place and two-place decimals on a number line<br>• *Choose and use standard metric units and their abbreviations when estimating, measuring and recording length, weight and capacity; know the meaning of 'kilo', 'centi' and 'milli' and, where appropriate, use decimal notation to record measurements (e.g. 1.3 m or 0.6 kg)*<br>• Interpret intervals and divisions on partially numbered scales and record readings accurately, where appropriate to the nearest tenth of a unit<br>• Draw rectangles and measure and calculate their perimeters; find the area of rectilinear shapes drawn on a square grid by counting squares<br>• *Know that angles are measured in degrees and that one whole turn is 360°; compare and order angles less than 180°*<br>• Recognise horizontal and vertical lines; use the eight compass points to describe direction; describe and identify the position of a square on a grid of squares |
| **Year 4 Block D Unit 3** | |
| | • Solve one-step and two-step problems involving numbers, money or measures, including time; choose and carry out appropriate calculations, using calculator methods where appropriate<br>• Refine and use efficient written methods to add and subtract two-digit and three-digit whole numbers and £.p<br>• Use decimal notation for tenths and hundredths and partition decimals; relate the notation to money and measurement; position one-place and two-place decimals on a number line<br>• *Choose and use standard metric units and their abbreviations when estimating, measuring and recording length, weight and capacity; know the meaning of 'kilo', 'centi' and 'milli' and, where appropriate, use decimal notation to record measurements (e.g. 1.3 m or 0.6 kg)*<br>• Interpret intervals and divisions on partially numbered scales and record readings accurately, where appropriate to the nearest tenth of a unit<br>• Read time to the nearest minute; use am, pm and 12-hour clock notation; choose units of time to measure time intervals; calculate time intervals from clocks and timetables<br>• Draw rectangles and measure and calculate their perimeters; find the area of rectilinear shapes drawn on a square grid by counting squares<br>• *Know that angles are measured in degrees and that one whole turn is 360°; compare and order angles less than 180°* |

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| | **Year 4 Block E Unit 1** |
| | • Represent a puzzle or problem using number sentences, statements or diagrams; use these to solve the problem; present and interpret the solution in the context of the problem<br>• *Derive and recall multiplication facts up to 10 × 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple*<br>• Recognise the equivalence between decimal and fraction forms of one half, quarters, tenths and hundredths<br>• *Use diagrams to identify equivalent fractions (e.g. $^{6}/_{8}$ and $^{3}/_{4}$, or $^{70}/_{100}$ and $^{7}/_{10}$); interpret mixed numbers and position them on a number line (e.g. $3\,^{1}/_{2}$)*<br>• Identify pairs of fractions that total 1<br>• Find fractions of numbers, quantities or shapes (e.g. $^{1}/_{5}$ of 30 plums, $^{3}/_{8}$ of a 6 by 4 rectangle) |
| | **Year 4 Block E Unit 2** |
| | • Represent a puzzle or problem using number sentences, statements or diagrams; use these to solve the problem; present and interpret the solution in the context of the problem<br>• *Derive and recall multiplication facts up to 10 × 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple*<br>• Recognise the equivalence between decimal and fraction forms of one half, quarters, tenths and hundredths *Use diagrams to identify equivalent fractions (e.g. $^{6}/_{8}$ and $^{3}/_{4}$, or $^{70}/_{100}$ and $^{7}/_{10}$); interpret mixed numbers and position them on a number line (e.g. $3\,^{1}/_{2}$)*<br>• Identify pairs of fractions that total 1<br>• Find fractions of numbers, quantities or shapes (e.g. $^{1}/_{5}$ of 30 plums, $^{3}/_{8}$ of a 6 by 4 rectangle) |
| | **Year 4 Block E Unit 3** |
| | • Represent a puzzle or problem using number sentences, statements or diagrams; use these to solve the problem; present and interpret the solution in the context of the problem<br>• *Derive and recall multiplication facts up to 10 × 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple*<br>• *Develop and use written methods to record, support and explain multiplication and division of two-digit numbers by a one-digit number, including division with remainders (e.g.15 × 9, 98 ÷ 6)*<br>• Recognise the equivalence between decimal and fraction forms of one half, quarters, tenths and hundredths<br>• *Use diagrams to identify equivalent fractions (e.g. $^{6}/_{8}$ and $^{3}/_{4}$, or $^{70}/_{100}$ and $^{7}/_{10}$); interpret mixed numbers and position them on a number line (e.g. $3\,^{1}/_{2}$)*<br>• Find fractions of numbers, quantities or shapes (e.g. $^{1}/_{5}$ of 30 plums, $^{3}/_{8}$ of a 6 by 4 rectangle)<br>• Use the vocabulary of ratio and proportion to describe the relationship between two quantities (e.g. 'There are 2 red beads to every 3 blue beads, or 2 beads in every 5 beads are red'); estimate a proportion (e.g. 'About one quarter of the apples in the box are green') |

| Year 5 Block A Unit 1 | |
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| | • Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols<br>• Count from any given number in whole-number and decimal steps, extending beyond zero when counting backwards; relate the numbers to their position on a number line<br>• *Explain what each digit represents in whole numbers and decimals with up to two places, and partition, round and order these numbers*<br>• *Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences and doubles and halves of decimals (e.g. 6.5 ± 2.7, half of 5.6, double 0.34)*<br>• *Use efficient written methods to add and subtract whole numbers and decimals with up to two places*<br>• Recall quickly multiplication facts up to 10 × 10 and use them to multiply pairs of multiples of 10 and 100; derive quickly corresponding division facts<br>• Identify pairs of factors of two-digit whole numbers and find common multiples (e.g. for 6 and 9)<br>• Use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 or 1000<br>• Extend mental methods for whole-number calculations, for example to multiply a two-digit by a one-digit number (e.g. 12 × 9), to multiply by 25<br>(e.g. 16 × 25), to subtract one near multiple of 1000 from another<br>(e.g. 6070 - 4097)<br>• Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations |
| **Year 5 Block A Unit 2** | |
| | • Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols<br>• Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies, including calculator use<br>• Count from any given number in whole-number and decimal steps, extending beyond zero when counting backwards; relate the numbers to their position on a number line<br>• *Explain what each digit represents in whole numbers and decimals with up to two places, and partition, round and order these numbers*<br>• *Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences and doubles and halves of decimals (e.g. 6.5 ± 2.7, half of 5.6, double 0.34)*<br>• *Use efficient written methods to add and subtract whole numbers and decimals with up to two places*<br>• Recall quickly multiplication facts up to 10 × 10 and use them to multiply pairs of multiples of 10 and 100; derive quickly corresponding division facts<br>• Identify pairs of factors of two-digit whole numbers and find common multiples (e.g. for 6 and 9)<br>• Use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 or 1000<br>• Extend mental methods for whole-number calculations, for example to multiply a two-digit by a one-digit number (e.g. 12 × 9), to multiply by 25<br>• (e.g. 16 × 25), to subtract one near multiple of 1000 from another<br>(e.g. 6070 - 4097)<br>• Use a calculator to solve problems, including those involving decimals or fractions (e.g. to find ¾ of 150g); interpret the display correctly in the context of measurement<br>• Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations |
| **Year 5 Block A Unit 3** | |
| | • Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols<br>• Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies, including calculator use<br>• Count from any given number in whole-number and decimal steps, extending beyond zero when counting backwards; relate the numbers to their position on a number line<br>• *Explain what each digit represents in whole numbers and decimals with up to two places, and partition, round and order these numbers*<br>• *Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences and doubles and halves of decimals (e.g. 6.5 ± 2.7, half of 5.6, double 0.34)*<br>• Recall quickly multiplication facts up to 10 × 10 and use them to multiply pairs of multiples of 10 and 100; derive quickly corresponding division facts<br>• Refine and use efficient written methods to multiply and divide HTU × U, TU × TU, U.t × U and HTU ÷ U<br>• Use a calculator to solve problems, including those involving decimals or fractions (e.g. to find ¾ of 150g); interpret the display correctly in the context of measurement<br>• Use knowledge of rounding, place value, number facts and inverse operations to estimate and |

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| | check calculations |
| **Year 5 Block B Unit 1** | |
| | • Explore patterns, properties and relationships and propose a general statement involving numbers or shapes; identify examples for which the statement is true or false<br>• Recall quickly multiplication facts up to 10 × 10 and use them to multiply pairs of multiples of 10 and 100; derive quickly corresponding division facts<br>• Identify pairs of factors of two-digit whole numbers and find common multiples (e.g. for 6 and 9)<br>• Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations<br>• *Use efficient written methods to add and subtract whole numbers and decimals with up to two places*<br>• Identify, visualise and describe properties of rectangles, triangles, regular polygons and 3-D solids; use knowledge of properties to draw 2-D shapes and identify and draw nets of 3-D shapes |
| **Year 5 Block B Unit 2** | |
| | • Explore patterns, properties and relationships and propose a general statement involving numbers or shapes; identify examples for which the statement is true or false<br>• Represent a puzzle or problem by identifying and recording the information or calculations needed to solve it; find possible solutions and confirm them in the context of the problem<br>• *Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences and doubles and halves of decimals (e.g. 6.5 ± 2.7, half of 5.6, double 0.34)*<br>• Recall quickly multiplication facts up to 10 × 10 and use them to multiply pairs of multiples of 10 and 100; derive quickly corresponding division facts<br>• Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations<br>• Identify, visualise and describe properties of rectangles, triangles, regular polygons and 3-D solids; use knowledge of properties to draw 2-D shapes and identify and draw nets of 3-D shapes |
| **Year 5 Block B Unit 3** | |
| | • Explore patterns, properties and relationships and propose a general statement involving numbers or shapes; identify examples for which the statement is true or false<br>• Represent a puzzle or problem by identifying and recording the information or calculations needed to solve it; find possible solutions and confirm them in the context of the problem<br>• *Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences and doubles and halves of decimals (e.g. 6.5 ± 2.7, half of 5.6, double 0.34)*<br>• Recall quickly multiplication facts up to 10 × 10 and use them to multiply pairs of multiples of 10 and 100; derive quickly corresponding division facts<br>• Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations<br>• *Use efficient written methods to add and subtract whole numbers and decimals with up to two places*<br>• Use a calculator to solve problems, including those involving decimals or fractions (e.g. to find $^{3}/_{4}$ of 150g); interpret the display correctly in the context of measurement<br>• Identify, visualise and describe properties of rectangles, triangles, regular polygons and 3-D solids; use knowledge of properties to draw 2-D shapes and identify and draw nets of 3-D shapes |

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| **Year 5 Block C Unit 1** | |
| | • Plan and pursue an enquiry; present evidence by collecting, organising and interpreting information; suggest extensions to the enquiry<br>• Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols<br>• Answer a set of related questions by collecting, selecting and organising relevant data; draw conclusions, using ICT to present features, and identify further questions to ask<br>• *Construct frequency tables, pictograms and bar and line graphs to represent the frequencies of events and changes over time*<br>• Find and interpret the mode of a set of data<br>• Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6kg to 2600g)<br>• Interpret a reading that lies between two unnumbered divisions on a scale |
| **Year 5 Block C Unit 2** | |
| | • Plan and pursue an enquiry; present evidence by collecting, organising and interpreting information; suggest extensions to the enquiry<br>• Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols<br>• Answer a set of related questions by collecting, selecting and organising relevant data; draw conclusions, using ICT to present features, and identify further questions to ask<br>• *Construct frequency tables, pictograms and bar and line graphs to represent the frequencies of events and changes over time*<br>• Describe the occurrence of familiar events using the language of chance or likelihood<br>• Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6kg to 2600g)<br>• Interpret a reading that lies between two unnumbered divisions on a scale |
| **Year 5 Block C Unit 3** | |
| | • Plan and pursue an enquiry; present evidence by collecting, organising and interpreting information; suggest extensions to the enquiry<br>• Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols<br>• Answer a set of related questions by collecting, selecting and organising relevant data; draw conclusions, using ICT to present features, and identify further questions to ask<br>• *Construct frequency tables, pictograms and bar and line graphs to represent the frequencies of events and changes over time*<br>• Find and interpret the mode of a set of data<br>• Describe the occurrence of familiar events using the language of chance or likelihood<br>• Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6kg to 2600g)<br>• Interpret a reading that lies between two unnumbered divisions on a scale |

| Year 5 Block D Unit 1 | |
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| | • Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies, including calculator use<br>• Use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 or 1000<br>• Use a calculator to solve problems, including those involving decimals or fractions (e.g. to find ¾ of 150 g); interpret the display correctly in the context of measurement<br>• *Read and plot coordinates in the first quadrant; recognise parallel and perpendicular lines in grids and shapes; use a set-square and ruler to draw shapes with perpendicular or parallel sides*<br>• Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6kg to 2600g)<br>• Interpret a reading that lies between two unnumbered divisions on a scale<br>• *Draw and measure lines to the nearest millimetre; measure and calculate the perimeter of regular and irregular polygons; use the formula for the area of a rectangle to calculate the rectangle's area*<br>• Read timetables and time using 24-hour clock notation; use a calendar to calculate time intervals |
| **Year 5 Block D Unit 2** | |
| | • Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies, including calculator use<br>• Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations<br>• *Use efficient written methods to add and subtract whole numbers and decimals with up to two places*<br>• Use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 or 1000<br>• Refine and use efficient written methods to multiply and divide HTU × U, TU × TU, U.t × U and HTU ÷ U<br>• Use a calculator to solve problems, including those involving decimals or fractions (e.g. to find ¾ of 150 g); interpret the display correctly in the context of measurement<br>• *Read and plot coordinates in the first quadrant; recognise parallel and perpendicular lines in grids and shapes; use a set-square and ruler to draw shapes with perpendicular or parallel sides*<br>• Estimate, draw and measure acute and obtuse angles using an angle measurer or protractor to a suitable degree of accuracy; calculate angles in a straight line<br>• Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6kg to 2600g)<br>• Interpret a reading that lies between two unnumbered divisions on a scale<br>• *Draw and measure lines to the nearest millimetre; measure and calculate the perimeter of regular and irregular polygons; use the formula for the area of a rectangle to calculate the rectangle's area* |
| **Year 5 Block D Unit 3** | |
| | • Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies, including calculator use<br>• Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations<br>• *Use efficient written methods to add and subtract whole numbers and decimals with up to two places*<br>• Refine and use efficient written methods to multiply and divide HTU × U, TU × TU, U.t × U and HTU ÷ U<br>• Use a calculator to solve problems, including those involving decimals or fractions (e.g. to find ¾ of 150 g); interpret the display correctly in the context of measurement<br>• *Read and plot coordinates in the first quadrant; recognise parallel and perpendicular lines in grids and shapes; use a set-square and ruler to draw shapes with perpendicular or parallel sides*<br>• Complete patterns with up to two lines of symmetry; draw the position of a shape after a reflection or translation<br>• Estimate, draw and measure acute and obtuse angles using an angle measurer or protractor to a suitable degree of accuracy; calculate angles in a straight line<br>• Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6kg to 2600g)<br>• Interpret a reading that lies between two unnumbered divisions on a scale<br>• *Draw and measure lines to the nearest millimetre; measure and calculate the perimeter of regular and irregular polygons; use the formula for the area of a rectangle to calculate the rectangle's area* |

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| | • Read timetables and time using 24-hour clock notation; use a calendar to calculate time intervals |
| **Year 5 Block E Unit 1** | |
| | • **Represent a puzzle or problem by identifying and recording the information or calculations needed to solve it; find possible solutions and confirm them in the context of the problem**<br>• **Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies, including calculator use**<br>• **Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols**<br>• **Express a smaller whole number as a fraction of a larger one (e.g. recognise that 5 out of 8 is $^{5}/_{8}$); find equivalent fractions (e.g. $^{7}/_{10}$ = $^{14}/_{20}$, or $^{19}/_{10}$= 1 $^{9}/_{10}$ ); relate fractions to their decimal representations**<br>• **Recall quickly multiplication facts up to 10 × 10 and use them to multiply pairs of multiples of 10 and 100; derive quickly corresponding division facts**<br>• **Identify pairs of factors of two-digit whole numbers and find common multiples (e.g. for 6 and 9) Extend mental methods for whole-number calculations, for example to multiply a two-digit number by a one-digit number (e.g. 12 × 9), to multiply by 25 (e.g. 16 × 25), to subtract one near-multiple of 1000 from another(e.g. 6070 - 4097)**<br>• **Refine and use efficient written methods to multiply and divide HTU × U, TU × TU, U.t × U and HTU ÷ U**<br>• **Find fractions using division (e.g. $^{1}/_{100}$of 5kg), and percentages of numbers and quantities (e.g. 10%, 5% and 15% of £80)**<br>• **Use a calculator to solve problems, including those involving decimals or fractions (e.g. find $^{3}/_{4}$of 150g); interpret the display correctly in the context of measurement** |
| **Year 5 Block E Unit 2** | |
| | • Represent a puzzle or problem by identifying and recording the information or calculations needed to solve it; find possible solutions and confirm them in the context of the problem<br>• Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols<br>• Express a smaller whole number as a fraction of a larger one (e.g. recognise that 5 out of 8 is $^{5}/_{8}$); find equivalent fractions (e.g. $^{7}/_{10}$ = $^{14}/_{20}$, or $^{19}/_{10}$= 1 $^{9}/_{10}$ ); relate fractions to their decimal representations<br>• Understand percentage as the number of parts in every 100 and express tenths and hundredths as percentages<br>• Use sequences to scale numbers up or down; solve problems involving proportions of quantities (e.g. decrease quantities in a recipe designed to feed six people)<br>• *Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences and doubles and halves of decimals (e.g. 6.5 ± 2.7, half of 5.6, double 0.34)*<br>• Find fractions using division (e.g. $^{1}/_{100}$of 5kg), and percentages of numbers and quantities (e.g. 10%, 5% and 15% of £80)<br>• Use a calculator to solve problems, including those involving decimals or fractions (e.g. find $^{3}/_{4}$ of 150g); interpret the display correctly in the context of measurement |
| **Year 5 Block E Unit 3** | |
| | • Represent a puzzle or problem by identifying and recording the information or calculations needed to solve it; find possible solutions and confirm them in the context of the problem<br>• Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies, including calculator use<br>• Express a smaller whole number as a fraction of a larger one (e.g. recognise that 5 out of 8 is $^{5}/_{8}$); find equivalent fractions (e.g. $^{7}/_{10}$ = $^{14}/_{20}$, or $^{19}/_{10}$= 1 $^{9}/_{10}$ ); relate fractions to their decimal representations<br>• Understand percentage as the number of parts in every 100 and express tenths and hundredths as percentages<br>• Use sequences to scale numbers up or down; solve problems involving proportions of quantities (e.g. decrease quantities in a recipe designed to feed six people)<br>• Refine and use efficient written methods to multiply and divide HTU × U, TU × TU, U.t × U and HTU ÷ U<br>• Find fractions using division (e.g. $^{1}/_{100}$of 5kg), and percentages of numbers and quantities (e.g. 10%, 5% and 15% of £80)<br>• Find fractions using division (e.g. $^{1}/_{100}$of 5kg), and percentages of numbers and quantities (e.g. 10%, 5% and 15% of £80) |

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| **Year 6 Block A Unit 1** | |
| | • Explain reasoning and conclusions, using words, symbols or diagrams as appropriate<br>• Find the difference between a positive and a negative integer, or two negative integers, in context<br>• Use decimal notation for tenths, hundredths and thousandths; partition, round and order decimals with up to three places, and position them on the number line<br>• *Use knowledge of place value and multiplication facts to 10 × 10 to derive related multiplication and division facts involving decimals (e.g. 0.8 × 7, 4.8 ÷ 6)*<br>• Calculate mentally with integers and decimals: U.t ± U.t, TU × U, TU ÷ U, U.t × U, U.t ÷ U<br>• Use a calculator to solve problems involving multi-step calculations<br>• Use approximations, inverse operations and tests of divisibility to estimate and check results |
| **Year 6 Block A Unit 2** | |
| | • Explain reasoning and conclusions, using words, symbols or diagrams as appropriate<br>• Solve multi-step problems, and problems involving fractions, decimals and percentages; choose and use appropriate calculation strategies at each stage, including calculator use<br>• Use decimal notation for tenths, hundredths and thousandths; partition, round and order decimals with up to three places, and position them on the number line<br>• *Use knowledge of place value and multiplication facts to 10 × 10 to derive related multiplication and division facts involving decimals (e.g. 0.8 × 7, 4.8 ÷ 6)*<br>• Calculate mentally with integers and decimals: U.t ± U.t, TU × U, TU ÷ U, U.t × U, U.t ÷ U<br>• *Use efficient written methods to add and subtract integers and decimals, to multiply and divide integers and decimals by a one-digit integer, and to multiply two-digit and three-digit integers by a two-digit integer*<br>• Use a calculator to solve problems involving multi-step calculations<br>• Use approximations, inverse operations and tests of divisibility to estimate and check results |
| **Year 6 Block A Unit 3** | |
| | • Explain reasoning and conclusions, using words, symbols or diagrams as appropriate<br>• Solve multi-step problems, and problems involving fractions, decimals and percentages; choose and use appropriate calculation strategies at each stage, including calculator use<br>• Use decimal notation for tenths, hundredths and thousandths; partition, round and order decimals with up to three places, and position them on the number line<br>• Calculate mentally with integers and decimals: U.t ± U.t, TU × U, TU ÷ U, U.t × U, U.t ÷ U<br>• *Use efficient written methods to add and subtract integers and decimals, to multiply and divide integers and decimals by a one-digit integer, and to multiply two-digit and three-digit integers by a two-digit integer*<br>• Use a calculator to solve problems involving multi-step calculationsUse approximations, inverse operations and tests of divisibility to estimate and check results |

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| **Year 6 Block B Unit 1** | |
| | • Represent and interpret sequences, patterns and relationships involving numbers and shapes; suggest and test hypotheses; construct and use simple expressions and formulae in words then symbols (e.g. the cost of ***C*** pens at 15 pence each is 15***C*** pence)<br>• Use knowledge of multiplication facts to derive quickly squares of numbers to 12 × 12 and the corresponding squares of multiples of 10<br>• *Use knowledge of place value and multiplication facts to 10 × 10 to derive related multiplication and division facts involving decimals (e.g. 0.8 × 7, 4.8 ÷ 6)*<br>• Recognise that prime numbers have only two factors and identify prime numbers less than 100; find the prime factors of two-digit numbers<br>• Use approximations, inverse operations and tests of divisibility to estimate and check results<br>• Describe, identify and visualise parallel and perpendicular edges or faces; use these properties to classify 2-D shapes and 3-D solids<br>• Make and draw shapes with increasing accuracy and apply knowledge of their properties |
| **Year 6 Block B Unit 2** | |
| | • Tabulate systematically the information in a problem or puzzle; identify and record the steps or calculations needed to solve it, using symbols where appropriate; interpret solutions in the original context and check their accuracy<br>• Represent and interpret sequences, patterns and relationships involving numbers and shapes; suggest and test hypotheses; construct and use simple expressions and formulae in words then symbols (e.g. the cost of ***C*** pens at 15 pence each is 15***C*** pence)<br>• Use knowledge of multiplication facts to derive quickly squares of numbers to 12 × 12 and the corresponding squares of multiples of 10<br>• *Use knowledge of place value and multiplication facts to 10 × 10 to derive related multiplication and division facts involving decimals (e.g. 0.8 × 7, 4.8 ÷ 6)*<br>• Recognise that prime numbers have only two factors and identify prime numbers less than 100; find the prime factors of two-digit numbers<br>• Use approximations, inverse operations and tests of divisibility to estimate and check results<br>• Use a calculator to solve problems involving multi-step calculations<br>• Describe, identify and visualise parallel and perpendicular edges or faces; use these properties to classify 2-D shapes and 3-D solids<br>• Make and draw shapes with increasing accuracy and apply knowledge of their properties |
| **Year 6 Block B Unit 3** | |
| | • Tabulate systematically the information in a problem or puzzle; identify and record the steps or calculations needed to solve it, using symbols where appropriate; interpret solutions in the original context and check their accuracy<br>• Represent and interpret sequences, patterns and relationships involving numbers and shapes; suggest and test hypotheses; construct and use simple expressions and formulae in words then symbols (e.g. the cost of ***C*** pens at 15 pence each is 15***C*** pence)<br>• Use knowledge of multiplication facts to derive quickly squares of numbers to 12 × 12 and the corresponding squares of multiples of 10<br>• *Use knowledge of place value and multiplication facts to 10 × 10 to derive related multiplication and division facts involving decimals (e.g. 0.8 × 7, 4.8 ÷ 6)*<br>• Recognise that prime numbers have only two factors and identify prime numbers less than 100; find the prime factors of two-digit numbers<br>• Use approximations, inverse operations and tests of divisibility to estimate and check results<br>• Use a calculator to solve problems involving multi-step calculations<br>• Describe, identify and visualise parallel and perpendicular edges or faces; use these properties to classify 2-D shapes and 3-D solids<br>• Make and draw shapes with increasing accuracy and apply knowledge of their properties |

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| **Year 6 Block C Unit 1** | |
| | • Suggest, plan and develop lines of enquiry; collect, organise and represent information, interpret results and review methods; identify and answer related questions<br>• *Solve problems by collecting, selecting, processing, presenting and interpreting data, using ICT where appropriate; draw conclusions and identify further questions to ask*<br>• Construct and interpret frequency tables, bar charts with grouped discrete data, and line graphs; interpret pie charts<br>• Describe and interpret results and solutions to problems using the mode, range, median and mean<br>• *Select and use standard metric units of measure and convert between units using decimals to two places (e.g. change 2.75 litres to 2750 ml, or vice versa)*<br>• Read and interpret scales on a range of measuring instruments, recognising that the measurement made is approximate and recording results to a required degree of accuracy; compare readings on different scales, for example when using different instruments |
| **Year 6 Block C Unit 2** | |
| | • *Solve problems by collecting, selecting, processing, presenting and interpreting data, using ICT where appropriate; draw conclusions and identify further questions to ask*<br>• Construct and interpret frequency tables, bar charts with grouped discrete data, and line graphs; interpret pie charts<br>• Describe and interpret results and solutions to problems using the mode, range, median and mean<br>• Describe and predict outcomes from data using the language of chance or likelihood<br>• *Select and use standard metric units of measure and convert between units using decimals to two places (e.g. change 2.75 litres to 2750 ml, or vice versa)*<br>• Read and interpret scales on a range of measuring instruments, recognising that the measurement made is approximate and recording results to a required degree of accuracy; compare readings on different scales, for example when using different instruments<br>• Use a calculator to solve problems involving multi-step calculations |
| **Year 6 Block C Unit 3** | |
| | • *Solve problems by collecting, selecting, processing, presenting and interpreting data, using ICT where appropriate; draw conclusions and identify further questions to ask*<br>• Construct and interpret frequency tables, bar charts with grouped discrete data, and line graphs; interpret pie charts<br>• Describe and interpret results and solutions to problems using the mode, range, median and mean<br>• Describe and predict outcomes from data using the language of chance or likelihood<br>• *Select and use standard metric units of measure and convert between units using decimals to two places (e.g. change 2.75 litres to 2750 ml, or vice versa)*<br>• Read and interpret scales on a range of measuring instruments, recognising that the measurement made is approximate and recording results to a required degree of accuracy; compare readings on different scales, for example when using different instruments<br>• Use a calculator to solve problems involving multi-step calculations |

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| **Year 6 Block D Unit 1** | |
| | • Solve multi-step problems, and problems involving fractions, decimals and percentages; choose and use appropriate calculation strategies at each stage, including calculator use<br>• Calculate mentally with integers and decimals: U.t ± U.t, TU × U, TU ÷ U, U.t × U, U.t ÷ U<br>• *Use efficient written methods to add and subtract integers and decimals, to multiply and divide integers and decimals by a one-digit integer, and to multiply two-digit and three-digit integers by a two-digit integer*<br>• Use a calculator to solve problems involving multi-step calculations<br>• Use approximations, inverse operations and tests of divisibility to estimate and check results<br>• *Select and use standard metric units of measure and convert between units using decimals to two places (e.g. change 2.75 litres to 2750 ml, or vice versa)*<br>• Solve problems by measuring, estimating and calculating; measure and calculate using imperial units still in everyday use; know their approximate metric values<br>• Read and interpret scales on a range of measuring instruments, recognising that the measurement made is approximate and recording results to a required degree of accuracy; compare readings on different scales, for example when using different instruments<br>• Calculate the perimeter and area of rectilinear shapes; estimate the area of an irregular shape by counting squares |
| **Year 6 Block D Unit 2** | |
| | • Solve multi-step problems, and problems involving fractions, decimals and percentages; choose and use appropriate calculation strategies at each stage, including calculator use<br>• Calculate mentally with integers and decimals: U.t ± U.t, TU × U, TU ÷ U, U.t × U, U.t ÷ U<br>• *Use efficient written methods to add and subtract integers and decimals, to multiply and divide integers and decimals by a one-digit integer, and to multiply two-digit and three-digit integers by a two-digit integer*<br>• Use a calculator to solve problems involving multi-step calculations<br>• Use approximations, inverse operations and tests of divisibility to estimate and check results<br>• *Select and use standard metric units of measure and convert between units using decimals to two places (e.g. change 2.75 litres to 2750 ml, or vice versa)*<br>• Estimate angles, and use a protractor to measure and draw them, on their own and in shapes; calculate angles in a triangle or around a point<br>• Use coordinates in the first quadrant to draw, locate and complete shapes that meet given properties<br>• *Visualise and draw on grids of different types where a shape will be after reflection, after translations, or after rotation through 90° or 180° about its centre or one of its vertices* |
| **Year 6 Block D Unit 3** | |
| | • Solve multi-step problems, and problems involving fractions, decimals and percentages; choose and use appropriate calculation strategies at each stage, including calculator use<br>• Calculate mentally with integers and decimals: U.t ± U.t, TU × U, TU ÷ U, U.t × U, U.t ÷ U<br>• *Use efficient written methods to add and subtract integers and decimals, to multiply and divide integers and decimals by a one-digit integer, and to multiply two-digit and three-digit integers by a two-digit integer*<br>• Use a calculator to solve problems involving multi-step calculations<br>• Use approximations, inverse operations and tests of divisibility to estimate and check results<br>• *Select and use standard metric units of measure and convert between units using decimals to two places (e.g. change 2.75 litres to 2750 ml, or vice versa)*<br>• Solve problems by measuring, estimating and calculating; measure and calculate using imperial units still in everyday use; know their approximate metric values<br>• Read and interpret scales on a range of measuring instruments, recognising that the measurement made is approximate and recording results to a required degree of accuracy; compare readings on different scales, for example when using different instruments<br>• Calculate the perimeter and area of rectilinear shapes; estimate the area of an irregular shape by counting squares |

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| **Year 6 Block E Unit 1** | |
| | • Tabulate systematically the information in a problem or puzzle; identify and record the steps or calculations needed to solve it, using symbols where appropriate; interpret solutions in the original context and check their accuracy<br>• Explain reasoning and conclusions, using words, symbols or diagrams as appropriate<br>• Solve multi-step problems, and problems involving fractions, decimals and percentages; choose and use appropriate calculation strategies at each stage, including calculator use<br>• *Use knowledge of place value and multiplication facts to 10 × 10 to derive related multiplication and division facts involving decimals (e.g. 0.8 × 7, 4.8 ÷ 6)*<br>• *Use efficient written methods to add and subtract integers and decimals, to multiply and divide integers and decimals by a one-digit integer, and to multiply two-digit and three-digit integers by a two-digit integer*<br>• Use a calculator to solve problems involving multi-step calculations<br>• Express a larger whole number as a fraction of a smaller one (e.g. recognise that 8 slices of a 5-slice pizza represents $^{8}/_{5}$ or 1 $^{3}/_{5}$ pizzas); simplify fractions by cancelling common factors; order a set of fractions by converting them to fractions with a common denominator<br>• Relate fractions to multiplication and division (e.g. 6 ÷ 2 = $^{1}/_{2}$ of 6 = 6 × $^{1}/_{2}$); express a quotient as a fraction or decimal (e.g. 67 ÷ 5 = 13.4 or 13 $^{2}/_{5}$); find fractions and percentages of whole-number quantities (e.g. $^{5}/_{8}$ of 96, 65% of £260)<br>• Solve simple problems involving direct proportion by scaling quantities up or down |
| **Year 6 Block E Unit 2** | |
| | • Tabulate systematically the information in a problem or puzzle; identify and record the steps or calculations needed to solve it, using symbols where appropriate; interpret solutions in the original context and check their accuracy<br>• Explain reasoning and conclusions, using words, symbols or diagrams as appropriate<br>• Use a calculator to solve problems involving multi-step calculations<br>• Express a larger whole number as a fraction of a smaller one (e.g. recognise that 8 slices of a 5-slice pizza represents $^{8}/_{5}$ or 1 $^{3}/_{5}$ pizzas); simplify fractions by cancelling common factors; order a set of fractions by converting them to fractions with a common denominator<br>• *Express one quantity as a percentage of another (e.g. express £400 as a percentage of £1000); find equivalent percentages, decimals and fractions*<br>• Relate fractions to multiplication and division (e.g. 6 ÷ 2 = $^{1}/_{2}$ of 6 = 6 × $^{1}/_{2}$); express a quotient as a fraction or decimal (e.g. 67 ÷ 5 = 13.4 or 13 $^{2}/_{5}$); find fractions and percentages of whole-number quantities (e.g. $^{5}/_{8}$ of 96, 65% of £260)<br>• Solve simple problems involving direct proportion by scaling quantities up or down |
| **Year 6 Block E Unit 3** | |
| | • Tabulate systematically the information in a problem or puzzle; identify and record the steps or calculations needed to solve it, using symbols where appropriate; interpret solutions in the original context and check their accuracy<br>• Solve multi-step problems, and problems involving fractions, decimals and percentages; choose and use appropriate calculation strategies at each stage, including calculator use<br>• *Use knowledge of place value and multiplication facts to 10 × 10 to derive related multiplication and division facts involving decimals (e.g. 0.8 × 7, 4.8 ÷ 6*<br>• *Use efficient written methods to add and subtract integers and decimals, to multiply and divide integers and decimals by a one-digit integer, and to multiply two-digit and three-digit integers by a two-digit integer*<br>• Use a calculator to solve problems involving multi-step calculations<br>• Express a larger whole number as a fraction of a smaller one (e.g. recognise that 8 slices of a 5-slice pizza represents $^{8}/_{5}$ or 1 $^{3}/_{5}$ pizzas); simplify fractions by cancelling common factors; order a set of fractions by converting them to fractions with a common denominator<br>• *Express one quantity as a percentage of another (e.g. express £400 as a percentage of £1000); find equivalent percentages, decimals and fractions*<br>• Relate fractions to multiplication and division (e.g. 6 ÷ 2 = $^{1}/_{2}$ of 6 = 6 × $^{1}/_{2}$); express a quotient as a fraction or decimal (e.g. 67 ÷ 5 = 13.4 or 13 $^{2}/_{5}$); find fractions and percentages of whole-number quantities (e.g. $^{5}/_{8}$ of 96, 65% of £260)<br>• Solve simple problems involving direct proportion by scaling quantities up or down |