

AUTUMN TERM, SPRING TERM and SUMIMER TERM

| Week | Unit | Lesson titles | Domain | National Curriculum Pupils should be taught to: |
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| 1 | Unit 1- Place value within 10,000,000 | Lesson 1 - Numbers to 1,000,000 | Number- Number and place value | - Read, write, order and compare numbers up to $10,000,000$ and determine the value of each digit. |
|  |  | Lesson 2 - Numbers to 10,000,000 | Number- Number and place value | - Read, write, order and compare numbers up to $10,000,000$ and determine the value of each digit. |
|  |  | Lesson 3 - Partition number to 10,000,000 | Number- Number and place value | - Read, write, order and compare numbers up to $10,000,000$ and determine the value of each digit. |
|  |  | $\begin{aligned} & \text { Lesson } 4 \text { - Powers of } \\ & 10 \end{aligned}$ | Number- Number and place value | - Read, write, order and compare numbers up to $10,000,000$ and determine the value of each digit. |
| 2 |  | Lesson 5 - Number line to $10,000,000$ | Number- Number and place value | - Read, Read, write, order and compare numbers up to $10,000,000$ and determine the value of each digit. |
|  |  | Lesson 6 - Compare and order any number | Number- Number and place value | - Read, write, order and compare numbers up to $10,000,000$ and determine the value of each digit. |
|  |  | Lesson 7 - Round any number | Number- Number and place value | - . Read, write, order and compare numbers up to $10,000,000$ and determine the value of each digit. |
|  |  | Lesson 8 - Negative numbers | Number- Number and place value | - Use negative numbers in context, and calculate intervals across zero. |
| 3 | Unit 2 - Four operation (1) | Lesson 1 - Add integers | Number - Addition, subtraction, multiplication and division | - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. |
|  |  | Lesson 2 - Subtract integers | Number - Addition, subtraction, multiplication and division | - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. |
|  |  | Lesson 3 - Problem solving -addition and subtraction | Number - Addition, subtraction, multiplication and division | - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. |
|  |  | Lesson 4 - Common factors | Number - Addition, subtraction, | - Identify common factors, common multiples and prime numbers. |

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|  |  |  | multiplication and division |  |
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| 4 |  | Lesson 5 - Common multiples | Number - Addition, subtraction, multiplication and division | - Identify common factors, common multiples and prime numbers. |
|  |  | Lesson 6 - Rules of divisibility | Number - Addition, subtraction, multiplication and division | - Identify common factors, common multiples and prime numbers. |
|  |  | $\begin{aligned} & \text { Lesson } 7 \text { - Primes to } \\ & 100 \end{aligned}$ | Number - Addition, subtraction, multiplication and division | - Identify common factors, common multiples and prime numbers. |
|  |  | Lesson 8 - Squares and cubes | Number - Addition, subtraction, multiplication and division | - Recognise and use square numbers and cube numbers, and the notation for squared ( ${ }^{2}$ ) and cubed ( ${ }^{3}$ ). (YEAR FIVE) |
| 5 | Unit 3-Four operations (2) | Lesson 1 - Multiply by a 1-digit number | Number - Addition, subtraction, multiplication and division | - Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. |
|  |  | Lesson 2 - Multiply up to a 4 -digit number by a 2-digit number | Number - Addition, subtraction, multiplication and division | - Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. |
|  |  | Lesson 3 - Short division | Number - Addition, subtraction, multiplication and division | - Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. |
|  |  | Lesson 4 - Division using factors | Number - Addition, subtraction, multiplication and division | - Identify common factors, common multiples and prime numbers. |


| 6 |  | Lesson 5 - Divide a 3digit number by a 2-dgit number (long division) | Number - Addition, subtraction, multiplication and division |  | Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. |
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|  |  | Lesson 6 - Divide a 4digit number by a 2-dgit number (long division) | Number - Addition, subtraction, multiplication and division |  | Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. |
|  |  | Lesson 7 - Long division with remainders | Number - Addition, subtraction, multiplication and division |  | Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. |
|  |  | Lesson 8 - Order of Operations | Number - Addition, subtraction, multiplication and division |  | Use their knowledge of the order of operations to carry out calculations involving the four operations. |
| 7 |  | Lesson 9 - Brackets | Number - Addition, subtraction, multiplication and division |  | Use their knowledge of the order of operations to carry out calculations involving the four operations. |
|  |  | Lesson 10 - Mental calculations (1) | Number - Addition, subtraction, multiplication and division |  | Perform mental calculations, including with mixed operations and large numbers. |
|  |  | Lesson 11 - Mental calculations (2) | Number - Addition, subtraction, multiplication and division |  | Perform mental calculations, including with mixed operations and large numbers. |
|  |  | Lesson 12 - Reason from known facts | Number - Addition, subtraction, multiplication and division |  | Use their knowledge of the order of operations to carry out calculations involving the four operations. |

## $8 \quad$ Unit 4 Fractions (1)

Lesson 1 - Equivalent
fractions and simplifying
fractions

Lesson 2 - Equivalent fractions on a number line
Lesson 3 - Compare and order fractions

## Lesson 4 - Add and subtract simple fractions

Lesson 5 - Add and subtract any two fractions
Lesson 6 - Add mixed numbers

Lesson 7 - Subtract mixed numbers

Lesson 8 - Multi-step problems

Lesson 9 - Problem solving - add and subtract fractions

Number - Fractions (including decimals and percentages) Number - Fractions (including decimals and percentages) Number - Fractions (including decimals and percentages)
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- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
- Compare and order fractions, including fractions $>1$.
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- Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
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|  | Unit 5Fractions (2) | Lesson 1 - Multiply fractions by integers | Number - Fractions (including decimals and percentages) |  | Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. |
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|  |  | Lesson 2 - Multiplying a fraction by a fraction (1) | Number - Fractions (including decimals and percentages) |  | Multiply simple pairs of proper fractions, writing the answer in its simplest form. |
|  |  | Lesson 3 - Multiplying a fraction by a fraction (2) | Number - Fractions (including decimals and percentages) |  | Multiply simple pairs of proper fractions, writing the answer in its simplest form. |
| 11 |  | Lesson 4 - Dividing a fraction by an integer (1) | Number - Fractions (including decimals and percentages) |  | Divide proper fractions by whole numbers. |
|  |  | Lesson 5 - Dividing a fraction by an integer (2) | Number - Fractions (including decimals and percentages) |  | Divide proper fractions by whole numbers. |
|  |  | Lesson 6 - Dividing a fraction by an integer (3) | Number - Fractions (including decimals and percentages) |  | Divide proper fractions by whole numbers. |
|  |  | Lesson 7 - Mixed questions with fractions | Number - Fractions (including decimals and percentages) |  | Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. |
| 12 |  | Lesson 8 - Fraction of amount | Number - Fractions (including decimals and percentages) |  | Use written division methods in cases where the answer has up to two decimal places. |
|  |  | Lesson 9 - Fraction of an amount - find the whole | Number - Fractions (including decimals and percentages) |  | Use written division methods in cases where the answer has up to two decimal places. |
|  | Unit 6 Measure imperial and | Lesson 1 - Metric measures | Measurement |  | Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places. |

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|  | metric measures | Lesson 2 - Convert metric measures | Measurement | - Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places. |
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| 1 |  | Lesson 3 - Calculate with metric measures | Measurement | - Solve problems involving calculations and conversion of units of measure, using decimal notation up to three decimal places where appropriate. |
|  |  | Lesson 4 - Miles and km | Measurement | - Convert between miles and kilometres. |
|  |  | Lesson 5 - Imperial measures | Measurement | - Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places. |
|  | Unit 7-Ratio and proportion | Lesson 1 - Use ratio language | Ratio and proportion | - Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
| 2 |  | Lesson 2 - Introduce ratio symbol | Ratio and proportion | - Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
|  |  | Lesson 3 - Ratio and fractions | Ratio and proportion | - Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
|  |  | Lesson 4 - Scale drawing | Ratio and proportion | - Solve problems involving similar shapeswhere the scale factor is known can be found. |
|  |  | $\text { Lesson } 5 \text { - Scale }$ factors | Ratio and proportion | - Solve problems involving similar shapeswhere the scale factor is known can be found. |
| 3 |  | Lesson 6 - Similar shapes | Ratio and proportion | - Solve problems involving similar shapeswhere the scale factor is known can be found. |
|  |  | Lesson 7 - Ratio problems | Ratio and proportion | - Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
|  |  | Lesson 8 - Problem solving - ration and proportion (1) | Ratio and proportion | - Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
|  |  | Lesson 9 - Problem solving - ration and proportion (2) | Ratio and proportion | - Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
| 4 | Unit 8Algebra | Lesson 1 - Find a rule one step | Algebra | - Generate and describe linear number sequences. |

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|  |  | Lesson 5 - Divide by 10, 100 and 1,000 | Number - Fractions (including decimals and percentages) | - Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10,100 and 1,000 giving answers up to three decimal places. |
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| 8 |  | Lesson 6 - Multiply decimals by integers | Number - Fractions (including decimals and percentages) | - Multiply one-digit numbers with up to two decimal places by whole numbers. |
|  |  | Lesson 7 - Divide decimals by integers | Number - Fractions (including decimals and percentages) | - Use written division methods in cases where the answer has up to two decimal places. |
|  |  | Lesson 8 - Fractions to decimals | Number - Fractions (including decimals and percentages) | - Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction. |
|  |  | Lesson 9 - Fractions as divisions | Number - Fractions (including decimals and percentages) | - Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction. |
| 9 | Unit 10Percentages | Lesson 1 - Understand percentages | Number - Fractions (including decimals and percentages) | - Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
|  |  | Lesson 2 - Fractions to percentages | Number - Fractions (including decimals and percentages) | - Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
|  |  | Lesson 3 - Equivalent fractions, decimals and percentages | Number - Fractions (including decimals and percentages) | - Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
|  |  | Lesson 4 - Order fractions, decimals and percentages | Number - Fractions (including decimals and percentages) | - Compare and order fractions, including fractions $>1$. |

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| 10 |  | Lesson 5 - Simple percentage of an amount | Number - Fractions (including decimals and percentages) |  | Solve problems involving the calculation of percentages (for example, of measures, and such as $15 \%$ of 360 ) and the use of percentages for comparison. |
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|  |  | Lesson 6 - Percentage of an amount - 1\% | Number - Fractions (including decimals and percentages) |  | Solve problems involving the calculation of percentages (for example, of measures, and such as $15 \%$ of 360 ) and the use of percentages for comparison. |
|  |  | Lesson 7 - Percentages of an amount | Number - Fractions (including decimals and percentages) |  | Solve problems involving the calculation of percentages (for example, of measures, and such as $15 \%$ of 360 ) and the use of percentages for comparison. |
|  |  | Lesson 8 - Percentages (missing values) | Number - Fractions (including decimals and percentages) |  | Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
| 11 | Unit 11 Measure perimeter, area and volume | Lesson 1 - Shapes same area | Measurement |  | Recognise that shapes with the same areas can have different perimeters and vice versa. |
|  |  | Lesson 2 - Area and perimeter | Measurement |  | Recognise that shapes with the same areas can have different perimeters and vice versa. |
|  |  | Lesson 3 - Area and perimeter - missing length | Measurement |  | Recognise that shapes with the same areas can have different perimeters and vice versa. |
|  |  | Lesson 4 - Area of a triangle | Measurement |  | Calculate the area of parallelograms and triangles. |
| 12 |  | Lesson 5 - Area of a right-angled triangle | Measurement |  | Calculate the area of parallelograms and triangles. |
|  |  | Lesson 6 - Area of any triangle | Measurement |  | Calculate the area of parallelograms and triangles. |
|  |  | Lesson 7 - Area of a parallelogram | Measurement |  | Recognise when it is possible to use formulae for area and volume of shapes. |
|  |  | Lesson 8 - Problem solving - area | Measurement |  | Calculate the area of parallelograms and triangles. |
| 1 |  | Lesson 9 - Problem solving - perimeter | Measurement |  | Recognise that shapes with the same areas can have different perimeters and vice versa. |

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Unit 14 Geometry position and direction

|  | Lesson 4 - Angles in a triangle - special cases | Geometry | - Compare and classify geometric shapes based on their properties and sizes, and find unknown angles in any triangles, quadrilaterals and regular polygons. |
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|  | Lesson 5 - Angles in a triangle - special cases | Geometry | - Compare and classify geometric shapes based on their properties and sizes, and find unknown angles in any triangles, quadrilaterals and regular polygons. |
|  | Lesson 6 - Angles in quadrilaterals | Geometry | - Compare and classify geometric shapes based on their properties and sizes, and find unknown angles in any triangles, quadrilaterals and regular polygons. |
|  | Lesson 7 - Angles in polygons | Geometry | - Compare and classify geometric shapes based on their properties and sizes, and find unknown angles in any triangles, quadrilaterals and regular polygons. |
|  | Lesson 8 - Circles | Geometry | - Illustrate and name parts of circles, including radius, diameter and circumference, and know that the diameter is twice the radius. |
|  | Lesson 9 - Parts of a circle | Geometry | - Illustrate and name parts of circles, including radius, diameter and circumference, and know that the diameter is twice the radius. |
|  | Lesson 10 - Draw shapes accurately | Geometry | - Draw 2D shapes using given dimensions and angles. |
|  | Lesson 11 - Nets of a 3D shapes (1) | Geometry | - Recognise, describe and build simple 3D shapes, including making nets. |
|  | Lesson 12 - Nets of a 3D shapes (2) | Geometry | - Recognise, describe and build simple 3D shapes, including making nets. |
| Unit 14Geometry position and direction | Lesson 1 - The first quadrant | Geometry | - Describe positions on the full coordinate grid (all four quadrants). |
|  | Lesson 2 - Read and plot points in four quadrants | Geometry | - Describe positions on the full coordinate grid (all four quadrants). |
|  | Lesson 3 - Solve problems with coordinates | Geometry | - Describe positions on the full coordinate grid (all four quadrants). |
|  | Lesson 4 - Translations | Geometry | - Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. |
|  | Lesson 5 - Reflections | Geometry | - Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. |
| Unit 15Problem solving | Lesson 1 - Problem solving - place value | Number - Addition, subtraction, multiplication and division | - Solve number and practical problems that involve all of the above. |

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| 9 |  | Lesson 2 - Problem solving - negative numbers | Number - Addition, subtraction, multiplication and division |  | Solve number and practical problems that involve all of the above. |
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|  |  | Lesson 3 Problem solving addition and subtraction | Number - Addition, subtraction, multiplication and division |  | Use estimation to check answer to calculations and determine, in the context of a problem, an appropriate degree of accuracy. |
|  |  | Lesson 4 - Problem solving - four operations (1) | Number - Addition, subtraction, multiplication and division |  | Solve problems involving addition, subtraction, multiplication and division. |
|  |  | Lesson 5 - Problem solving - four operations (2) | Number - Addition, subtraction, multiplication and division |  | Solve problems involving addition, subtraction, multiplication and division. |
| 10 |  | Lesson 6 - Problem solving - fractions | Number - Addition, subtraction, multiplication and division |  | Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
|  |  | Lesson 7- Problem solving - decimals | Number - Addition, subtraction, multiplication and division |  | Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
|  |  | Lesson 8 - Problem solving - percentages | Number - Addition, subtraction, multiplication and division |  | Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
|  |  | Lesson 9 - Problem solving - ratio and proportion | Number - Addition, subtraction, multiplication and division |  | Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |
| 11 |  | Lesson 10 - Problem solving - time (1) | Number - Addition, subtraction, |  | Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places. |

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|  |  | multiplication and <br> division |  |
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|  |  | Lesson 11 - Problem <br> solving - time (2) | Number - Addition, <br> subtraction, <br> multiplication and <br> division | | $\bullet$ |
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