



## Year 6

### Autumn 1

| Topic  | Curriculum Objective  |
|--|---|
| Place value and rounding off   | <ul style="list-style-type: none"><li>• To read, write, order and compare numbers at least to 10,000,000 and determine the value of each digit.</li><li>• To round any whole number to a required degree of accuracy.</li><li>• To solve number problems and practical problems that involve all of the above.</li></ul>  |
| Mental and written addition and subtraction of large numbers                                 | <ul style="list-style-type: none"><li>• To perform mental calculations, including with mixed operations and large numbers.</li><li>• To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li></ul>   |
| Multiples, factors and prime numbers   | <ul style="list-style-type: none"><li>• To perform mental calculations, including with mixed operations and large numbers.</li><li>• To identify common factors, common multiples and prime numbers.</li><li>• To solve problems involving addition, subtraction, multiplication and division.</li></ul>  |
| Written methods for multiplication and division: $HTU \times TU$ and $HTU \div U$            | <ul style="list-style-type: none"><li>• To multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient written method of long multiplication.</li><li>• To divide numbers up to 4 digits by a two-digit whole number using the efficient written method of long division, and interpret remainders as whole number remainders, fractions or by rounding, as appropriate for the context.</li><li>• To solve problems involving addition, subtraction, multiplication and division.</li><li>• To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li></ul> |
| Circles and angles   | <ul style="list-style-type: none"><li>• To illustrate and name parts of circles, including radius, diameter and circumference.</li><li>• To recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</li></ul>   |
| Units of measure   | <ul style="list-style-type: none"><li>• To solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate.</li><li>• To 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 three decimal places.</li><li>• To convert between miles and kilometres.</li></ul>   |
| <ul style="list-style-type: none"><li>• To assess and review the half-term's work.</li></ul> |   |



## Year 6

### Autumn 2

| Date                     | Topic   | Curriculum Objective  |
|--------------------------|---|---|
|                          | Written methods for multiplication and division | <ul style="list-style-type: none"><li>• To multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient written method of long multiplication.</li><li>• To divide numbers up to 4 digits by a two-digit whole number using efficient written methods of long division and interpret remainders as whole numbers, remainders, fractions or by rounding as appropriate in the context.</li></ul>  |
|                          | Comparing, ordering and simplifying fractions   | <ul style="list-style-type: none"><li>• To compare and order fractions, including fractions <math>&gt;1</math>.</li><li>• To use common factors to simplify fractions; use common multiples to express fractions in the same denomination.</li></ul>  |
|                          | Multiplying decimals by 10, 100 and 1000        | <ul style="list-style-type: none"><li>• To identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100, 1000 where the answers are up to three decimal places.</li><li>• To solve problems which require answers to be rounded to specified degrees of accuracy.</li></ul>  |
|                          | Order of operations                             | <ul style="list-style-type: none"><li>• To perform mental calculations, including with mixed operations and large numbers.</li><li>• To use their knowledge of the order of operations to carry out calculations involving the four operations.</li><li>• To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li><li>• To solve problems involving addition, subtraction, multiplication and division.</li><li>• To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li></ul> |
|                          | 2D and 3D shapes                                | <ul style="list-style-type: none"><li>• To draw 2D shapes using given dimensions and angles.</li><li>• To compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons.</li><li>• To recognise, describe and build simple 3D shapes, including making nets.</li></ul>  |
|                          | Pie charts                                      | <ul style="list-style-type: none"><li>• To interpret and construct pie charts and line graphs and use these to solve problems.</li></ul>  |
| <b>Assess and Review</b> |   | <ul style="list-style-type: none"><li>• To assess and review the half-term's work.</li></ul>  |



## Year 6

### Spring 1

| Date                     | Topic   | Curriculum Objective  |
|--------------------------|---|---|
|                          | Negative numbers, and solving problems involving numbers          | <ul style="list-style-type: none"><li>• To read, write, order and compare numbers at least to 10,000,000 and determine the value of each digit.</li><li>• To round any whole number to a required degree of accuracy.</li><li>• To use negative numbers in context, and calculate intervals across zero.</li><li>• To solve number problems and practical problems that involve all of the above.</li></ul>   |
|                          | Mental and written addition and subtraction of decimals and money | <ul style="list-style-type: none"><li>• To perform mental calculations, including with mixed operations and large numbers.</li><li>• To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li><li>• To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li></ul>  |
|                          | Mental and written multiplication and division                    | <ul style="list-style-type: none"><li>• To perform mental calculations, including with mixed operation and large numbers.</li><li>• To identify common factors, common multiples and prime numbers (Children could practise using mental methods that involve using factors, for example.)</li><li>• To use their knowledge of the order of operations to carry out calculations involving the four operations.</li><li>• To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li></ul>  |
|                          | Calculating with fractions  | <ul style="list-style-type: none"><li>• To add and subtract fractions with different denominators, using the concept of equivalent fractions.</li><li>• To associate a fraction with division to calculate decimal fraction equivalents (0.375) for a simple fraction (<math>\frac{3}{8}</math>).</li><li>• To multiply simple pairs of proper fractions, writing the answer in its simplest form (<math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math>).</li><li>• To divide proper fractions by whole numbers (<math>\frac{1}{3} \div 2 = \frac{1}{6}</math>).</li></ul>                         |
|                          | Reflections and translations on coordinate axes                   | <ul style="list-style-type: none"><li>• To describe positions on the full co-ordinate grid (all four quadrants).</li><li>• To draw and translate simple shapes on the co-ordinate plane, and reflect them in the axes.</li></ul>  |
|                          | Perimeter, area and volume  | <ul style="list-style-type: none"><li>• To recognise that shapes with the same area can have different perimeters and vice versa.</li><li>• To calculate the area of parallelograms and triangles.</li><li>• To recognise when it is necessary to use the formulae for area and volume of shapes.</li><li>• To calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (<math>\text{cm}^3</math>) and cubic metres (<math>\text{m}^3</math>) and extending to other units such as <math>\text{mm}^3</math> and <math>\text{km}^3</math>.</li></ul> |
| <b>Assess and Review</b> |   | <ul style="list-style-type: none"><li>• To assess and review the half-term's work.</li></ul>  |



## Year 6

### Spring 2

| Date                     | Title                               | Curriculum Objective  |
|--------------------------|-------------------------------------|---|
|                          | Calculating with large numbers      | <ul style="list-style-type: none"><li>• To multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient written method of long multiplication.</li><li>• To divide numbers up to 4 digits by a two-digit whole number using the efficient written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.</li><li>• To perform mental calculations, including with mixed operations and large numbers.</li><li>• To use their knowledge of the order of operations to carry out calculations involving the four operations.</li><li>• To solve problems involving addition, subtraction, multiplication and division.</li></ul> |
|                          | Multiplying and dividing decimals   | <ul style="list-style-type: none"><li>• To multiply one-digit numbers with up to two decimal places by whole numbers.</li><li>• To use written division methods in cases where the answer has up to two decimal places.</li><li>• To solve problems which require answers to be rounded to specified degrees of accuracy.</li></ul>   |
|                          | Percentages, decimals and fractions | <ul style="list-style-type: none"><li>• To solve problems involving the calculation of percentages of whole numbers or measures and the use of percentages for comparison.</li><li>• To recall and use equivalences between simple fractions, decimals and percentages, including different contexts.</li></ul>   |
|                          | Simple formulae                     | <ul style="list-style-type: none"><li>• To express missing number problems algebraically.</li><li>• To use simple formulae expressed in words.</li><li>• To find pairs of numbers that satisfy number sentences involving two unknowns.</li><li>• To enumerate all possibilities of combinations of two variables.</li></ul>  |
|                          | Area and volume                     | <ul style="list-style-type: none"><li>• To solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places, where appropriate.</li><li>• To 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 three decimal places.</li><li>• To calculate the area of parallelograms and triangles.</li><li>• To recognise when it is necessary to use the formulae for area and volume of shapes.</li></ul>  |
|                          | Line graphs                         | <ul style="list-style-type: none"><li>• To interpret and construct pie charts and line graphs and use these to solve problems.</li></ul>  |
| <b>Assess and Review</b> |                                     | <ul style="list-style-type: none"><li>• To assess and review the half-term's work.</li></ul>  |



## Year 6

### Summer 1

| Date                     | Topic  | Curriculum Objective   |
|--------------------------|--|--|
|                          | Problems involving number                              | <ul style="list-style-type: none"><li>• To read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.</li><li>• To round any whole number to a required degree of accuracy.</li><li>• To use negative numbers in context and calculate intervals across zero.</li><li>• To solve number problems and practical problems that involve all the above.</li></ul>  |
|                          | Adding and subtracting large and small numbers         | <ul style="list-style-type: none"><li>• To perform mental calculations, including with mixed operations and large numbers.</li><li>• To solve addition and subtraction multi-step problems in contexts, deciding which operations to use and why.</li><li>• To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li></ul>   |
|                          | Long multiplication and division                       | <ul style="list-style-type: none"><li>• To multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient written methods of long multiplication.</li><li>• To divide numbers up to 4 digits by two digit whole numbers using the efficient written method of long division and interpret remainders as whole number remainders, fractions or by rounding, as appropriate for the context.</li><li>• To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li></ul> |
|                          | Working with fractions                                 | <ul style="list-style-type: none"><li>• To add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.</li><li>• To multiply simple pairs of proper fractions, writing the answer in its simplest form.</li><li>• To divide proper fractions by whole numbers.</li></ul>  |
|                          | Problems involving percentages, fractions and decimals | <ul style="list-style-type: none"><li>• To solve problems involving the calculation of percentages of whole numbers or measures and the use of percentages for comparison.</li><li>• To recall and use equivalences between simple fractions, decimals and percentages including in different contexts.</li></ul>  |
|                          | Ratio and proportion                                   | <ul style="list-style-type: none"><li>• To solve problems involving the relative size of two quantities where missing values can be found by using integer multiplication and division facts.</li><li>• To solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</li><li>• To solve problems involving similar shapes where the scale factor is known or can be found.</li></ul>   |
| <b>Assess and Review</b> |  | <ul style="list-style-type: none"><li>• To assess and review the half-term's work.</li></ul>   |



## Year 6

### Summer 2

| Date                     | Topic                                       | Curriculum Objective  |
|--------------------------|---|---|
|                          | Solving problems involving money            | <ul style="list-style-type: none"><li>• To multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient written method of long multiplication.</li><li>• To divide numbers up to 4 digits by a two-digit whole number using the efficient written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.</li><li>• To perform mental calculations, including with mixed operations and large numbers.</li><li>• To use their knowledge of the order of operations to carry out calculations involving the four operations.</li><li>• To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li><li>• To solve problems involving addition, subtraction, multiplication and division.</li><li>• To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li></ul> |
|                          | Number puzzles                              | <ul style="list-style-type: none"><li>• To express missing number problems algebraically.</li><li>• To use simple formulae expressed in words.</li><li>• To generate and describe linear number sequences.</li><li>• To find pairs of numbers that satisfy number sentences involving two unknowns.</li><li>• To enumerate all possibilities of combinations of two variables.</li></ul>  |
|                          | Fractions with different denominators       | <ul style="list-style-type: none"><li>• To multiply simple pairs of proper fractions, writing the answer in its simplest form<br/>(<math>\frac{1}{4} \div \frac{1}{2} = \frac{1}{8}</math>).</li><li>• To use common factors to simplify fractions; use common multiples to express fractions in the same denomination.</li><li>• To add and subtract fractions with different denominators and mixed numbers using the concept of equivalent fractions.</li></ul>  |
|                          | Problems involving percentages and decimals | <ul style="list-style-type: none"><li>• To solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360 and the use of percentages for comparison.</li><li>• To recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</li></ul>   |
|                          | Problems involving measures                 | <ul style="list-style-type: none"><li>• To solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate.</li><li>• To use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a large unit and vice versa, using decimal notation to three decimal places.</li></ul>   |
|                          | Using data                                  | <ul style="list-style-type: none"><li>• To interpret and construct pie charts and line graphs and use these to solve problems.</li><li>• To calculate and interpret the mean as an average.</li></ul>   |
| <b>Assess and Review</b> |   | <ul style="list-style-type: none"><li>• To assess and review the half-term's work.</li></ul>  |