



Year 6 Maths Long Term Plan

Autumn Term

Week & Focus	Objectives
1 Number and Place Value Unit 1	<ul style="list-style-type: none"> read, write, order and compare numbers up to 10 000 000 and determine the value of each digit round any whole number to a required degree of accuracy solve number and practical problems that involve numbers up to 10 000 000 use negative numbers in context, and calculate intervals across zero
2 Addition and Subtraction Value Unit 1	<ul style="list-style-type: none"> perform mental calculations, including with large numbers solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why solve problems involving addition, subtraction, multiplication and division use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
3 Addition and Subtraction Unit 3	<ul style="list-style-type: none"> practise addition and subtraction for larger numbers, using the formal written methods of columnar addition and subtraction solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why solve problems involving addition, subtraction, multiplication and division use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
4 Addition and Subtraction Unit 5	<ul style="list-style-type: none"> perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the four operations practise addition and subtraction for larger numbers, using the formal written methods of columnar addition and subtraction solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why solve problems involving addition, subtraction, multiplication and division
5 Multiplication and Division Unit 2	<ul style="list-style-type: none"> practise multiplication for larger numbers, using the formal written methods of short and long multiplication multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication perform mental calculations, including with large numbers solve problems involving addition, subtraction, multiplication and division use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
6 Multiplication and Division Unit 4	<ul style="list-style-type: none"> practise division for larger numbers, using the formal written method of short division divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context perform mental calculations, including with large numbers identify common factors, common multiples and prime numbers solve problems involving addition, subtraction, multiplication and division use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
7 Fractions Unit 2	<ul style="list-style-type: none"> use common factors to simplify fractions; use common multiples to express fractions in the same denomination compare and order fractions, including fractions > 1 add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions solve problems which require answers to be rounded to specified degrees of accuracy



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8 Fractions Unit 7	<ul style="list-style-type: none">• use common factors to simplify fractions; use common multiples to express fractions in the same denomination• add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions• multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]• divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]
9 Fractions Unit 10	<ul style="list-style-type: none">• use common factors to simplify fractions; use common multiples to express fractions in the same denomination• add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions• multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]• divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]
10 Properties of Shape Unit 1	<ul style="list-style-type: none">• recognise, describe and build simple 3-D shapes, including making nets
11 Properties of Shape Unit 5	<ul style="list-style-type: none">• draw 2-D shapes using given dimensions and angles• compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons• recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
12 Properties of Shape Unit 9	<ul style="list-style-type: none">• illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius• draw 2-D shapes using given dimensions and angles



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Spring Term	
Week & Focus	Objectives
1 Decimals Unit 3	<ul style="list-style-type: none"> identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places solve problems which require answers to be rounded to specified degrees of accuracy multiply decimals by whole numbers, starting with the simplest cases, such as $0.4 \times 2 = 0.8$, and in practical contexts, such as measures and money
2 Fractions (Decimals) Unit 4	<ul style="list-style-type: none"> associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$] recall and use equivalences between simple fractions, decimals and percentages, including in different contexts solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison [NC Domain: Ratio and proportion]
3 Fractions (Percentage) Unit 12	<ul style="list-style-type: none"> associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$] recall and use equivalences between simple fractions, decimals and percentages, including in different contexts solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison [NC Domain: Ratio and proportion] solve problems which require answers to be rounded to specified degrees of accuracy
4 Multiplication and Division Unit 6	<ul style="list-style-type: none"> practise multiplication for larger numbers, using the formal written method of long multiplication* multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication perform mental calculations, including with large numbers use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
5 Multiplication and Division Unit 8	<ul style="list-style-type: none"> practise division for larger numbers, using the formal written method of long 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 perform mental calculations, including with large numbers use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
6 Measurements (volume and capacity) Unit 10	<ul style="list-style-type: none"> solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate use, read, write and convert between standard units, converting measurements of volume from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places calculate, estimate and compare volume of cubes and cuboids, using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]



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7 Statistics Unit 7	<ul style="list-style-type: none">• interpret and construct pie charts and line graphs and use these to solve problems• calculate and interpret the mean as an average• solve comparison, sum and difference problems using information presented in a line graph• complete, read and interpret information in tables, including timetables
8 Statistics Unit 12	<ul style="list-style-type: none">• interpret and construct pie charts and line graphs and use these to solve problems• calculate and interpret the mean as an average
9 Ratio and Proportion Unit 7	<ul style="list-style-type: none">• solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts• solve problems involving similar shapes where the scale factor is known or can be found• solve problems involving unequal sharing and grouping using knowledge of fractions and multiples
10 Ratio and Proportion Unit 11	<ul style="list-style-type: none">• solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts• solve problems involving similar shapes where the scale factor is known or can be found• solve problems involving unequal sharing and grouping using knowledge of fractions and multiples
11 Algebra Unit 5	<ul style="list-style-type: none">• use simple formulae• generate and describe linear number sequences• express missing number problems algebraically• find pairs of numbers that satisfy an equation with two unknowns• enumerate possibilities of combinations of two variables
12 Algebra Unit 9	<ul style="list-style-type: none">• use simple formulae• generate and describe linear number sequences• express missing number problems algebraically• find pairs of numbers that satisfy an equation with two unknowns• enumerate possibilities of combinations of two variables• construct and solve simple linear equations eg: $2n + 3 = n + 5$• find different possible numbers for formulae with two variables eg: $a + 3 = b - 7$



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Summer Term	
Week & Focus	Objectives
1 Multiplication and Division (Decimals) Unit 6	<ul style="list-style-type: none"> multiply one-digit numbers with up to two decimal places by whole numbers multiply numbers with up to two decimal places by one-digit whole numbers * multiply decimals by whole numbers, starting with the simplest cases, such as $0.4 \times 2 = 0.8$, and in practical contexts, such as measures and money perform mental calculations solve problems involving addition, subtraction, multiplication and division solve problems which require answers to be rounded to specified degrees of accuracy use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
2 Multiplication and Division (Decimals) Unit 8	<ul style="list-style-type: none"> use written division methods in cases where the answer has up to two decimal places divide numbers with up to two decimal places by one-digit and two-digit whole numbers perform mental calculations solve problems involving addition, subtraction, multiplication and division solve problems which require answers to be rounded to specified degrees of accuracy use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
3 Measurement (length) Unit 3	<ul style="list-style-type: none"> solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate use, read, write and convert between standard units, converting measurements of length from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places convert between miles and kilometres
4 Measurements (mass) Unit 6	<ul style="list-style-type: none"> solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate use, read, write and convert between standard units, converting measurements of mass from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
5 Position and Direction Unit 2	<ul style="list-style-type: none"> describe positions on the full coordinate grid (all four quadrants) draw and translate simple shapes on the coordinate plane, and reflect them in the axes
6 Position and Direction Unit 11	<ul style="list-style-type: none"> describe positions on the full coordinate grid (all four quadrants) draw and translate simple shapes on the coordinate plane, and reflect them in the axes
7 Multiplication and Division (Decimals) Unit 10	<ul style="list-style-type: none"> multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication multiply one-digit numbers with up to two decimal places by whole numbers multiply numbers with up to two decimal places by two-digit whole numbers solve problems involving addition, subtraction, multiplication and division solve problems which require answers to be rounded to specified degrees of accuracy use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy



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<p>8 Multiplication and Division (Decimals) Unit 12</p>	<ul style="list-style-type: none"> • use written division methods in cases where the answer has up to two decimal places • divide numbers with up to two decimal places by one-digit and two-digit whole numbers * • 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 • divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate • interpreting remainders according to the context • perform mental calculations • identify common factors, common multiples • solve problems involving addition, subtraction, multiplication and division • solve problems which require answers to be rounded to specified degrees of accuracy • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
<p>9 Measurement (perimeter and area) Unit 8</p>	<ul style="list-style-type: none"> • recognise that shapes with the same areas can have different perimeters and vice versa • recognise when it is possible to use formulae for area and volume of shapes • calculate the area of parallelograms and triangles
<p>10 Addition and Subtraction Unit 9</p>	<ul style="list-style-type: none"> • perform mental calculations, including with large numbers • practise addition and subtraction for larger numbers, using the formal written methods of columnar addition and subtraction * • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • solve problems involving addition, subtraction, multiplication and division • use their knowledge of the order of operations to carry out calculations involving the four operations • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
<p>11 Number (all operations) Unit 11</p>	<ul style="list-style-type: none"> • perform mental calculations, including with mixed operations and large numbers • use their knowledge of the order of operations to carry out calculations involving the four operations • solve problems involving addition, subtraction, multiplication and division
<p>12 Measurement (time) Unit 4</p>	<ul style="list-style-type: none"> • use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa