Planning Guidance
- Ensure each lesson contains an element of counting, which is linked to other areas of your Maths curriculum. For example, counting in 25s using the measuring cylinder ITP; counting in 5 minutes on a clock to make an hour.
- Ensure each lesson has a taught mental starter to engage the pupils and to help coverage. For example working on prime numbers as a mental starter before a lesson on simplifying fractions. Sometimes the mental starter will be linked to the main, whereas other times it won't
- Every lesson should involve reasoning and problem solving, through both content and questioning techniques.

Week	Topic	Autumn Term Objectives Covered
1-2	**Place Value & Number**	• Read, write, order and compare numbers to at least 10, 000 000 and determine the value of each digit • Round any number to a required degree of accuracy • Use negative numbers in context and calculate intervals across zero
3	**Mental Addition & Subtraction with Perimeter and Missing Angles**	• Perform mental calculations, including with mixed operations and larger numbers • 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. • Recognise that shapes with the same areas can have different perimeters and vice versa – calculate perimeters
4-5	**Written Addition & Subtraction**	• Perform mental calculations, including with mixed operations and larger numbers • Solve addition and subtraction multi-step problems in context
6	**Statistics**	• Interpret and construct pie charts and line graphs and use these to solve problems
7	**Mental Multiplication & Division with Area**	• Identify common factors, common multiples and prime numbers • Perform mental calculations, including with mixed operations and larger numbers • Use their knowledge of the order of operations to carry out calculations involving the four operations **Include teaching of BODMAS/BIDMAS at this point but for mental calculations**
8-9	**Written Multiplication & Division**	• Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • 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
10	**Problem Solving**	• [Finding all possibilities](#)
11-13	**Fractions, Decimals & Percentages**	• Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Compare and order fractions, including fractions > 1

Week	Topic	Objectives Covered
		• 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, ¼ x ½ = 1/8 • Divide proper fractions by whole numbers [for example, 1/3 divided by 2 = 1/6 • Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8 • Multiply one-digit numbers with up to two decimal places by whole numbers • Use written division methods in cases where the answer has up to two decimal places • Solve problems which require answers to be rounded to specified degrees of accuracy • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
14-15	**Geometry: Shape & Symmetry**	• Draw 2-D shapes using given dimensions and angles • Recognise, describe and build simple 3-D shapes, including making nets • Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
Week	**Topic**	**Spring Term** **Objectives Covered**
1-2	**Place Value & Number**	• Read, write, order and compare numbers to at least 10, 000 000 and determine the value of each digit • Round any number to a required degree of accuracy • Use negative numbers in context and calculate intervals across zero
3-4	**Measurement**	• 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, 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 • Convert between miles and kilometres
5	**Ratio & Proportion**	• 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 the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison • 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.
6-7	**Addition & Subtraction including perimeter, money, statistics & measures**	• Perform mental calculations, including with mixed operations and larger numbers • Solve addition and subtraction multi-step problems in context • Calculate and interpret the mean as an average. • 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. • Recognise that shapes with the same areas can have different perimeters and vice versa – calculate perimeters
8	**Problem Solving**	• Finding Rules
9-10	**Multiplication and division including area, money, ratio &measures**	• Identify common factors, common multiples and prime numbers • Perform mental calculations, including with mixed operations and larger numbers • Use their knowledge of the order of operations to carry out calculations involving the four operations **Include teaching of BODMAS/BIDMAS at this point but for mental calculations**

Week	Topic	Objectives Covered
		• Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • 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
11-12	**Fractions, Decimals & Percentages**	• Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • 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 • Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, ¼ x ½ = 1/8 • Divide proper fractions by whole numbers [for example, 1/3 divided by 2 = 1/6 • Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8 • Multiply one-digit numbers with up to two decimal places by whole numbers • Use written division methods in cases where the answer has up to two decimal places • Solve problems which require answers to be rounded to specified degrees of accuracy • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
Week	**Topic**	**Summer Term** **Objectives Covered**
1-3	**Algebra including area, perimeter and volume**	• 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. • 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 • 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].
4-6	**All Four Operations including area, money, ratio, measures perimeter & Statistics**	• Perform mental calculations, including with mixed operations and larger numbers • Solve addition and subtraction multi-step problems in context • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. • Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • 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, including with mixed operations and larger numbers
		• Solve addition and subtraction multi-step problems in context
7-8	**Fractions, Decimals & Percentages**	• Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
		• 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
		• Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, ¼ x ½ = 1/8
		• Divide proper fractions by whole numbers [for example, 1/3 divided by 2 = 1/6
		• Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8
		• Multiply one-digit numbers with up to two decimal places by whole numbers
		• Use written division methods in cases where the answer has up to two decimal places
		• Solve problems which require answers to be rounded to specified degrees of accuracy
		• Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
9-10	**Position & Direction**	• 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.
11	**Problem Solving**	• Logic Puzzles