Year 6 Curriculum Coverage

Below is the coverage for the Year 6 Maths curriculum. Ongoing objectives across the year are highlighted in red.

Number and place value

- 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
- use negative numbers in context, and calculate intervals across 0
- solve number and practical problems that involve all of the above

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
- 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 large numbers
- identify common factors, common multiples and prime numbers
- use their knowledge of the order of operations to carry out calculations involving the 4 operations
- 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

Number - fractions

- 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, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]
- divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]
- associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$]
- identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places
- multiply one-digit numbers with up to 2 decimal places by whole numbers
- use written division methods in cases where the answer has up to 2 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

Ratio and proportion

- solve problems involving the relative sizes of 2 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

Algebra

- use simple formulae
- generate and describe linear number sequences
- express missing number problems algebraically
- find pairs of numbers that satisfy an equation with 2 unknowns
- enumerate possibilities of combinations of 2 variables

Measurement

- solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 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 3 decimal places
- convert between miles and kilometres
- 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]

Geometry - properties of shapes

- 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
- illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
- recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles

Geometry – position and direction

- describe positions on the full coordinate grid (all 4 quadrants)
- draw and translate simple shapes on the coordinate plane, and reflect them in the axes

Statistics

- interpret and construct pie charts and line graphs and use these to solve problems
- calculate and interpret the mean as an average

Year 6 Rapid Recall

Listed below are the number facts that we expect year 6 children to learn by heart. We track children's assessments in these facts on a half termly basis. This data informs our number focus for the next half

Number facts, number bonds	Counting	Addition and subtraction facts	Times tables and division facts	Doubles and halves
Know the fraction, decimal and percentage conversion for ½ ¼ ¾ 1/3, 1/5, 1/8 1/10, 1/100				Know halves of any number up to 100 Know doubles of any number up to 100

term for whole class starters and afternoon intervention groups.

Teaching sequence - Starter tasks

We have carefully planned our curriculum so that some key concepts are revisited throughout the year.

	Week1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn 1	Naming 2d and 3d shapes and properties Perimeter of rectilinear shapes Arear of rectilinear shapes – count squares	Read, write, order and compare numbers with up to 3 decimal places Round decimals with 2dp to 1dp and whole numbers Factors, multiples, primes, squares and cube numbers	Time to the nearest 1 minutes. 12 and 24 hour clocks, analogue and digital Convert between units of time	Convert mixed numbers to improper fractions and vice versa Compare and order fractions whose denominators are all multiples of the same number	Interpret pictograms, tally chart, bar chart, time graphs, timetables and tables.	Arear of rectilinear shapes – count squares Coordinates Find missing angles	Multiply and divide whole numbers and decimals by 10 100 and 1000 Multiply up to 4 digits numbers with a 1 or 2 digit number Divide numbers up to 4 digit with a 1 digit number
Autumn 2	Read, write, order and compare numbers with up to 3 decimal places Round decimals with 2dp to 1dp and whole numbers	Naming 2d and 3d shapes and properties Perimeter of rectilinear shapes Arear of rectilinear shapes – count squares	Multiply and divide whole numbers and decimals by 10 100 and 1000 Multiply up to 4 digits numbers with a 1 or 2 digit number Divide numbers up	Interpret pictograms, tally chart, bar chart, time graphs, timetables and tables.	Time to the nearest 1 minutes. 12 and 24 hour clocks, analogue and digital Convert between units of time	Convert mixed numbers to improper fractions and vice versa Compare and order fractions whose denominators are all multiples of	Arear of rectilinear shapes – count squares Coordinates - 4 quadrants Find missing angles

	Factors, multiples, primes, squares and cube numbers		to 4 digit with a 1 digit number			the same number	
Spring 1	Multiply and divide whole numbers and decimals by 10 100 and 1000 Multiply up to 4 digits numbers with a 1 or 2 digit number Divide numbers up to 4 digit with a 1 digit number	Interpret pictograms, tally chart, bar chart, time graphs, line graphs, timetables and tables.	Multiply one digit numbers with up to 2 decimals places with whole numbers Read, write, order and compare numbers with up to 3 decimal places Round decimals with 2dp to 1dp and whole numbers	Naming 2d and 3d shapes and properties Area, perimeter and volume	Convert mixed numbers to improper fractions and vice versa Compare and order fractions whose denominators are all multiples of the same number Factors, multiples, primes, squares and cube numbers	Time to the nearest 1 minutes. 12 and 24 hour clocks, analogue and digital Convert between units of time	Interpret pictograms, tally chart, bar chart, time graphs, line graphs, timetables and tables.
Spring 2	Area, perimeter and volume Coordinates - 4 quadrants Find missing angles	multiply simple pairs of proper fractions	Time to the nearest 1 minutes. 12 and 24 hour clocks, analogue and digital Convert between units of time	Multiply and divide whole numbers and decimals by 10 100 and 1000 Multiply up to 4 digits numbers with a 1 or 2 digit number Divide numbers up to 4 digit with a 1 digit number	Multiply one digit numbers with up to 2 decimals places with whole numbers Read, write, order and compare numbers with up to 3 decimal places Round decimals with 2dp to 1dp and whole numbers Factors, multiples, primes, squares and cube numbers		
Summer 1	Time to the nearest 1 minutes. 12 and 24 hour clocks, analogue and digital Convert between units of time	Multiply and divide whole numbers and decimals by 10 100 and 1000 Multiply up to 4 digits numbers with a 1 or 2 digit number Divide numbers up to 4 digit with	Interpret pictograms, tally chart, bar chart, time graphs, line graphs, timetables and tables.	Naming 2d and 3d shapes and properties Area, perimeter and volume	Multiply one digit numbers with up to 2 decimals places with whole numbers Read, write, order and compare numbers with up to 3 decimal places	Convert mixed numbers to improper fractions and vice versa Compare and order fractions whose denominators are all multiples of the same number	

		a 1 digit number			Round decimals with 2dp to 1dp and whole numbers	Factors, multiples, primes, squares and cube numbers	
Summer 2	Multiply and divide whole numbers and decimals by 10 100 and 1000 Multiply up to 4 digits numbers with a 1 or 2 digit number Divide numbers up to 4 digit with a 1 digit number	Multiply one digit numbers with up to 2 decimals places with whole numbers Read, write, order and compare numbers with up to 3 decimal places Round decimals with 2dp to 1dp and whole numbers	Area, perimeter and volume Coordinates - 4 quadrants Find missing angles	Convert mixed numbers to improper fractions and vice versa Compare and order fractions whose denominators are all multiples of the same number	Interpret pictograms, tally chart, bar chart, time graphs, line graphs, timetables and tables.	Time to the nearest 1 minutes. 12 and 24 hour clocks, analogue and digital Convert between units of time	Multiply and divide whole numbers and decimals by 10 100 and 1000 Multiply up to 4 digits numbers with a 1 or 2 digit number Divide numbers up to 4 digit with a 1 digit number

Teaching sequence – Daily counting

Counting will be an essential element to each daily maths lesson.

Teaching sequence – Main Maths Lesson Coverage

We have carefully planned our curriculum so that some key concepts are revisited throughout the year.

Autumn 1	Place value	Calculation	Fractions	Shape	Measure
Autumn 2	Calculation	Fractions	Position & direction	Measure	Ratio & proportion
Spring 1	Calculation	Fractions	Statistics	Shape	
Spring 2	Position & direction	Measure	Ratio & proportion	Algebra	
Summer 1	Fractions	Statistics	Measure		
Summer 2	Position & direction	Calculation	Algebra		

Autumn 1	**Place value** • 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 • use negative numbers in context, and calculate intervals across 0 **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 • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why **Fractions**

	• 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, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$] • divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$] **Shape** • 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 **Measure** • 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 (cm³) and cubic metres (m³), and extending to other units [for example, mm³ and km³]
Autumn 2	**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 • 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 **Fractions** • associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$] • identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places • multiply one-digit numbers with up to 2 decimal places by whole numbers • use written division methods in cases where the answer has up to 2 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 **Position and direction** • describe positions on the full coordinate grid (all 4 quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes **Measure** • solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 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 3 decimal places • convert between miles and kilometres **Ratio and proportion** • solve problems involving the relative sizes of 2 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
Spring 1	**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 • use their knowledge of the order of operations to carry out calculations involving the 4 operations **Number - fractions** • 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, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$] • divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$] **Statistics** • interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average **Shape** • draw 2-D shapes using given dimensions and angles • recognise, describe and build simple 3-D shapes, including making nets • illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • 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
Spring 2	**Position and direction** • describe positions on the full coordinate grid (all 4 quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes **Measure** • 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] **Ratio and proportion** • solve problems involving the relative sizes of 2 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 **Algebra** • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with 2 unknowns

	• enumerate possibilities of combinations of 2 variables **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 • 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 • use their knowledge of the order of operations to carry out calculations involving the 4 operations
Summer 1	**Fractions** • associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$] • identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places • multiply one-digit numbers with up to 2 decimal places by whole numbers • use written division methods in cases where the answer has up to 2 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 **Statistics** • interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average **Measure** • solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 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 3 decimal places • convert between miles and kilometres
Summer 2	**Position and direction** • describe positions on the full coordinate grid (all 4 quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes **Algebra** • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with 2 unknowns • enumerate possibilities of combinations of 2 variables **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 • 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 • use their knowledge of the order of operations to carry out calculations involving the 4 operations