

Year 5 Maths Curriculum



Autumn

Key Vocab

Place Value

ones, tens, hundreds, thousands, ten thousands, hundred thousands, million, place value, digit, partition, estimate, round, compare, order, sequence, greater than ($>$), less than ($<$), equivalent, convert, value, unitise, amount

Addition & Subtraction

add, subtract, mental, inverse, estimate, round, distance chart, sum, total

Multiplication & Division

multiply, divide, factor, multiple, prime number, composite number, square number, cube number, prime factor, inverse operation, remainder

Fractions

Fraction, numerator, denominator, unit fraction, non-unit fraction, proper fraction, improper fraction, mixed number, equivalent, simplify, convert, common denominator, sequence, order, greater than ($>$), less than ($<$), equal to ($=$)

Key Skills

Number: Place Value

- Read, write, order and compare numbers up to 1,000,000.
- Recognise the place value of each digit up to 1,000,000.
- Count forwards and backwards in powers of 10 and other multiples.
- Round any number to the nearest 10, 100, 1,000, 10,000, or 100,000.
- Solve number problems and practical problems involving place value.
- Read Roman Numerals to 1000 and recognize years written in Roman Numerals.

Year 5 Maths Curriculum

Number: Addition and Subtraction

- Add and subtract whole numbers with more than 4 digits using formal written methods.
- Perform mental calculations including mixed operations and large numbers.
- Use rounding, estimation and inverse operations to check answers.
- Solve multi-step problems involving addition and subtraction.

Number: Multiplication and Division

- Identify multiples and factors, including common factors of two numbers.
- Multiply and divide numbers mentally using known facts.
- Multiply and divide whole numbers up to 4 digits by a 1- or 2-digit number using formal written methods.
- Interpret remainders when dividing depending on context.
- Solve problems involving multiplication and division, including factor pairs and multi-step problems.

Number: Prime, Square and Cube Numbers

- Recognise and generate prime numbers up to 100.
- Identify square and cube numbers and their notation.
- Use knowledge of number properties to solve problems and reason mathematically.

Number: Fractions

- Recognise and generate equivalent fractions represented visually including tenths and hundredths.
- Compare and order fractions with similar or different denominators.
- Add and subtract fractions with the same denominator and related fractions.

Year 5 Maths Curriculum



Spring

Key Vocab

Multiplication & Division

multiply, divide, factor, multiple, prime number, composite number
square number, cube number, prime factor, inverse operation, remainder, Fractions of Amounts & Multiplying Fractions, fraction of an amount, equal parts, multiply, divide, operator,

Fractions, Decimals and Percentages

Fraction, numerator, denominator, unit fraction, non-unit fraction, proper fraction, improper fraction, mixed number, equivalent, simplify, convert, common denominator, sequence, order, greater than (>), less than (<), equal to (=), Decimal, decimal point, decimal place, tenth, hundredth, thousandth, percentage (%), per cent, digit, place value

Area, Perimeter, Measures

Perimeter, area, scale, estimate, compare, length, width, centimetre (cm), metre (m), square centimetre (cm²), square metre (m²), formula

Statistics

line graph, table, dual line graph, axis / axes, scale, data, plot

Key Skills

Number: Multiplication and Division

- Identify multiples and factors, factor pairs, including prime factors. Prime numbers and composite numbers.
- Establish whether a number up to 100 is prime and recall prime numbers up to 19
- Multiply and divide numbers mentally using known facts and place value.
- Multiply and divide whole numbers up to 4 digits by a 2-digit number using formal written methods.

Year 5 Maths Curriculum

- Solve multi-step problems involving addition, subtraction, multiplication and division and a combination of these.
- Recognise and use the relationship between multiplication and division to check calculations.
- Multiply and divide whole numbers and those involving decimals by 10, 100, 1000.
- Solve problems involving multiplication and division, including scaling by simple fractions.

Number: Fractions

- Multiply unit and non-unit fractions by an integer.
- Solve problems involving fractions of quantities.
- Understand mixed numbers and improper fractions and convert between them.
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Number: Decimals and Percentages

- Read, write, order and round decimals to the nearest whole number and one decimal place.
- Recognise and write decimal equivalents of fractions.
- Solve problems involving decimals in real-life contexts.
- Recognise percentages and understand them as fractions of 100.

Measurement: Perimeter and Area

- Measure and calculate the perimeter of composite shapes.
- Calculate the area of rectangles and composite rectilinear shapes using multiplication.
- Solve practical problems involving perimeter and area.

Statistics

- Interpret and present data using line graphs, bar charts, and tables including timetables.
- Solve comparison, sum and difference problems using information presented in a line graph.
- Draw conclusions and make predictions based on data.

Year 5 Maths Curriculum



Summer

Key Vocab

Properties of Shape

Angle, right angle, acute angle, obtuse angle, reflex angle, degrees ($^{\circ}$), interior angle, orientation, clockwise / anticlockwise

Shape, Position and Direction

Reflection, translation, coordinates, vertex / vertices, mirror line, horizontal axis, vertical axis, angle, right angle, acute, obtuse, reflex, degree ($^{\circ}$), orientation, parallel, perpendicular, quadrilateral, regular / irregular, 3D shape, translation, reflection, coordinates, mirror line, horizontal / vertical axis

Decimals

Decimal, decimal point, decimal place, tenths, hundredths, thousandths, place value, digit, convert, add / subtract decimals, multiply / divide, decimals

Converting Units of Measures

metric unit, imperial unit, convert, kilometre (km), metre (m), centimetre (cm), millimetre (mm), kilogram (kg), gram (g), litre (l), millilitre (ml), pound (£), pence (p)

Volume

Volume, capacity, cubic centimetre (cm^3), cubic metre (m^3), estimate, compare

Year 5 Maths Curriculum

Key Skills

Geometry: Shape, Position and direction

- Measure and compare angles in degrees.
- Estimate and compare obtuse, acute and reflex angles.
- Identify angles at a point, on a straight line, a whole turn, half turn and other multiples of 90 degrees and vertically opposite angles.
- Draw given angles, and measure them in degrees.
- Draw and classify 2D shapes based on properties.
- Use the properties of rectangle to deduce related facts and find missing lengths and angles.
- Distinguish between regular and irregular polygons , reasoning about equal sides and angles.
- Identify 3D shapes including cubes and other cuboids from 2D representations.
- Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language and know that the shape has not changed.
- Recognise and draw lines of symmetry.
- Plot points and describe positions on a 2D grid using coordinates.
- Solve problems involving angles, shape, and coordinates.

Number: Decimals and Percentages

- Read, write, order and round decimals up to three decimal places.
- Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents..
- Solve problems involving decimals, including money and measurement.
- Recognise percentages and understand them as fractions of 100.
- Solve problems involving percentage and decimal equivalents and those fractions with a denominator of a multiple of 10 or 25.


Negative Numbers

- Understand negative numbers
- Count through zero in ones and multiples
- Compare and order negative numbers.

Measurement: Converting Units, Volume and Problem Solving

- Convert between different units of measure (length, mass, volume, time).
- Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.

Year 5 Maths Curriculum

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- Estimate or Calculate and compare volume and capacity using standard units.
 - Solve practical problems involving measurement in real-life contexts including the use of decimal notation and scaling.