



Maths Yearly Overview

Year 4



Autumn Term

Block One : Place value

- Recognise the place value of each digit in a four-digit number, including thousands, hundreds, tens and ones, and explain the value of each digit.
- Order and compare numbers beyond 1000, using the symbols $<$, $>$ and $=$ and explaining how place value helps to determine their order.
- Find 1000 more or less than a given number, including when crossing a place-value boundary.
- Read Roman numerals to 100 (I to C) and recognise that the numeral system developed over time to include the concept of zero and place value.
- Identify, represent and estimate numbers using different representations, including place-value equipment and number lines.
- Round any number to the nearest 10, 100 or 1000 and explain how the value of the digits determines the rounded number.
- Count backwards through zero and recognise and use negative numbers in appropriate contexts.
- Solve number and practical problems involving place value, rounding and increasingly large positive and negative numbers.
- Use reasoning to identify numbers from clues about their place value, rounding or position on a number line, and explain how the clues lead to the answer.
- Investigate patterns when numbers are rounded or increased/decreased by 1000, making and explaining generalisations about what happens to the digits.

Block Two: Addition and subtraction

- Add and subtract numbers with up to four digits using formal written methods of columnar addition and subtraction where appropriate, including exchanging where necessary.
- Use mental methods and known number facts to add and subtract efficiently, choosing an appropriate strategy for the calculation.
- Estimate the answer to a calculation and use the estimate to decide whether an answer is reasonable.
- Use inverse operations to check answers and identify and correct errors in addition and subtraction calculations.
- Solve addition and subtraction problems involving numbers and practical contexts, including problems requiring more than one step.
- Solve problems where the most efficient method is not immediately obvious, explaining and justifying the strategy chosen.

Block Three: Multiplication and division

- Multiply together three numbers, using known multiplication facts and appropriate mental or written methods.
- Divide whole numbers by 10 and 100 where the answer is a whole number, using place value knowledge to explain what happens to the digits.
- Recognise and use factor pairs and the commutative law to support efficient mental calculations.
- Multiply two-digit and three-digit numbers by a one-digit number using a formal written method, including exchanging where necessary.
- Choose an efficient method for multiplication and division calculations and explain why the chosen method is appropriate.
- Solve multiplication and division problems involving factors, multiples and products, including finding missing values and explaining the reasoning used.

Block Four: Fractions (including decimals)

- Add and subtract fractions with the same denominator, including fractions greater than one where appropriate.
- Find fractions of quantities, including non-unit fractions, and solve problems where the answer is a whole number.
- Use fractions to divide quantities into equal parts and solve problems involving fractions of quantities.
- Recognise and show, using diagrams and representations, families of common equivalent fractions.
- Use known equivalent fractions to compare and order fractions and explain why fractions are equivalent.
- Solve problems involving fractions, including finding missing values and explaining the reasoning used.

Block Five: Geometry – properties of shape

- Compare and classify geometric shapes, including quadrilaterals and triangles, using their properties and sizes.
- Identify and describe the properties of triangles and quadrilaterals and use these properties to classify shapes.
- Identify acute and obtuse angles and compare and order angles up to two right angles by size.
- Identify lines of symmetry in 2-D shapes presented in different orientations.
- Complete simple symmetric figures with respect to a specific line of symmetry.
- Use reasoning to identify shapes from clues about their properties, including their sides, angles and lines of symmetry.

Ongoing

- recall multiplication and division facts for multiplication tables up to 12×12
- count in multiples of 6, 7, 9,



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Block Six: Measurement- Length and Money

- Convert between different units of length, including kilometres and metres, and metres, centimetres and millimetres.
- Estimate, measure and compare lengths using appropriate units and measuring equipment.
- Add and subtract lengths, using appropriate units and representations to support calculations.
- Solve practical problems involving length, including choosing appropriate units and converting between units of measure.
- Estimate, compare and calculate amounts of money in pounds and pence, using appropriate methods and representations.
- Solve practical problems involving money, including finding totals, calculating differences and working out missing amounts.



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Spring Term

Block One: Fractions (including decimals)

- Count up and down in hundredths and recognise that hundredths arise when dividing a whole into 100 equal parts and when dividing tenths by 10.
- Recognise and write decimal equivalents of tenths and hundredths and represent them using practical and pictorial representations.
- Recognise and write the decimal equivalents of $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$.
- Find the effect of dividing one- and two-digit numbers by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.
- Compare and order numbers with the same number of decimal places, up to two decimal places, using appropriate symbols and mathematical language.
- Round decimals with one decimal place to the nearest whole number and explain how the value of the digit determines the rounded answer.
- Solve simple measure and money problems involving fractions and decimals to two decimal places, selecting appropriate representations and explaining the reasoning used.

Block Four: Addition and subtraction

- Solve two-step addition and subtraction problems in a range of contexts, deciding which operations and methods to use and explaining why.
- Use mental and written methods to solve calculations efficiently, selecting an appropriate strategy for the numbers involved.
- Estimate answers before calculating and use estimates to judge whether answers are reasonable.
- Use inverse operations to check calculations and identify and correct errors.
- Solve problems where different methods can be used, comparing strategies and explaining which method is most efficient.

Block Two: Place value

- Revisit and apply place value knowledge to read, write, represent, compare and order increasingly large positive numbers.
- Use place value to identify the value of digits in increasingly large numbers and explain how the position of a digit affects its value.
- Use place value knowledge to solve number and practical problems involving increasingly large positive numbers.
- Reason about numbers using clues about their digits, place value and size, and explain how the clues lead to the answer.
- Investigate how changing one digit affects the value of a number and identify patterns when digits are increased or decreased.

Block Five: Multiplication and division

- Solve problems involving multiplication and addition, including multiplying two-digit numbers by one-digit numbers by partitioning the two-digit number.
- Use the distributive law to multiply two-digit numbers by one-digit numbers, explaining how the calculation can be split into parts.
- Use known multiplication facts to calculate unfamiliar multiplication problems efficiently.
- Choose an appropriate method to solve multiplication problems and explain why the method is effective.
- Solve problems involving multiplication in practical contexts, including finding missing values and explaining the reasoning used.
- Investigate different ways of calculating the same multiplication and explain why the methods give the same answer.

Block Three: Measurement- Area and Perimeter

- Measure and calculate the perimeter of rectilinear figures, including squares, in centimetres and metres.
- Use addition and subtraction to calculate the perimeter of rectilinear figures and solve problems involving missing side lengths.
- Find the area of rectilinear shapes by counting squares and record the area using appropriate units.
- Compare the perimeter and area of different rectilinear shapes and explain how their measurements are related.
- Solve practical problems involving perimeter and area, including finding missing measurements and choosing an appropriate method.
- Investigate different rectilinear shapes with the same perimeter or area and explain the patterns found.

Block Six: Measurement- Time

- Read, write and convert time between analogue and digital 12- and 24-hour clocks.
- Convert between units of time, including hours and minutes, minutes and seconds, years and months, and weeks and days.
- Use knowledge of time conversions to solve practical problems involving different units of time.
- Solve problems involving durations and conversions between units of time, selecting an appropriate method and explaining the reasoning used.
- Estimate and check answers to time-conversion problems and use known relationships between units to decide whether an answer is reasonable.



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Summer Term

Block One: Place value

- Count forwards and backwards in multiples of 6, 7, 9, 25 and 1000.
- Use known multiples to identify patterns and relationships in number sequences and explain how the pattern continues.
- Use knowledge of multiples to solve number and practical problems involving increasingly large positive numbers.
- Identify missing numbers in sequences involving multiples of 6, 7, 9, 25 and 1000 and explain how the missing values were determined.
- Use reasoning to determine whether a number belongs to a particular sequence of multiples and justify the answer.

Block Two: Geometry - position and direction

- Describe positions on a 2-D grid using coordinates in the first quadrant.
- Read and identify coordinates of points in the first quadrant and use them to describe position.
- Describe movements between positions as translations of a given unit to the left, right, up or down.
- Plot specified points on a 2-D grid and draw sides to complete a given polygon.
- Use coordinates and translations to solve problems involving movement and position on a grid.
- Reason from given coordinates and movements to identify missing points or describe a route, explaining the steps taken.

Block Three: Addition and subtraction

- Solve two-step addition and subtraction problems in a range of contexts, deciding which operations and methods to use and explaining why.
- Identify the information needed to solve a two-step problem and decide the order in which the calculations should be completed.
- Choose between mental and written methods when solving addition and subtraction problems and explain why the chosen method is appropriate.
- Solve problems involving missing information, using addition and subtraction to find unknown values.
- Interpret and explain solutions to two-step problems, checking that the answer is reasonable and answering the question asked.
- Create and solve two-step addition and subtraction problems, explaining the calculations.

Block Four: Multiplication and division

- Solve problems involving multiplication and addition, including using the distributive law to multiply two-digit numbers by one-digit numbers.
- Partition two-digit numbers to solve multiplication problems efficiently and explain how the distributive law has been used.
- Solve integer scaling problems involving multiplication and division, including scaling quantities up and down.
- Solve correspondence problems in which n objects are connected to m objects, using multiplication or division to find the number of possible combinations.
- Identify the operations needed to solve multi-step multiplication and division problems and explain the reasoning behind the chosen method.
- Create and solve scaling or correspondence problems and explain how the solution was found.

Block Five: Fractions (including decimals)

- Solve simple measure problems involving fractions and decimals to two decimal places.
- Solve simple money problems involving fractions and decimals to two decimal places.
- Apply knowledge of equivalent fractions and decimal equivalents when solving practical problems.
- Choose appropriate representations and methods to solve fraction and decimal problems and explain the reasoning used.
- Interpret information presented in practical contexts and identify the fraction or decimal needed to solve the problem.
- Check solutions to fraction and decimal problems and explain whether the answer is reasonable.

Block Six: Statistics

- Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
- Read and interpret information presented in bar charts, pictograms, tables and other graphs.
- Solve comparison problems using information presented in graphs, tables and charts.
- Solve sum and difference problems using information presented in graphs, tables and charts.
- Choose an appropriate graphical method to present a given set of data and explain why it is suitable.
- Interpret data to identify patterns, trends and differences, and explain conclusions using evidence from the data.



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Block Seven: Measurement- Mass and Capacity

- Convert between different units of mass, including kilograms and grams.
- Estimate, measure, compare, add and subtract masses using kilograms and grams.
- Solve practical problems involving mass, including choosing appropriate units and converting between units of measure.
- Convert between different units of capacity, including litres and millilitres.
- Estimate, measure, compare, add and subtract capacities using litres and millilitres.
- Solve practical problems involving capacity, including choosing appropriate units and converting between units of measure.
- Solve problems involving mass and capacity, selecting appropriate methods and explaining the reasoning used.