



Curriculum Information

Year Four - Maths



WESTFIELD PRIMARY

Curriculum Intent Statement

Our aim is to provide our children with an engaging, exciting and empowering curriculum that provides them with the confidence and skills to flourish in today's society and the future.

At Westfield Primary the curriculum is designed to: recognise children's prior learning, provide first hand learning experiences, develop independence and creativity and build resilience and a love for learning.

Every child is recognised as a unique individual. We celebrate and welcome differences within our school community. The ability to learn is underpinned by the teaching of basic skills, knowledge-based curriculum, concepts and values. We provide many enhancement opportunities to engage learning and we actively encourage involvement and participation in sport, the arts and computing. Learning at Westfield is underpinned by the belief that childhood should be a happy, investigative and enquiring time in our lives where there are no limits to curiosity and there is a thirst for new experiences and knowledge. We promote positive attitudes to learning which reflect the values and skills needed to promote responsibility for learning and future success.

Community involvement is an integral part of our curriculum, inviting families and visitors to facilitate learning new skills and sharing experiences such as assemblies, curriculum afternoons, sporting activities and performances.

Children leave Westfield with a sense of belonging to a tightly knit community, where they have the confidence and skills to make decisions, self-evaluate, make connections and become lifelong learners.



In Year 4, pupils will learn the following:

Number and Place Value

Count in multiples of 6, 7, 9, 25 and 1,000.
Find 1,000 more or less than a given number.
Count backwards through 0 to include negative numbers.
Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s).
Order and compare numbers beyond 1,000.
Identify, represent and estimate numbers using different representations.
Round any number to the nearest 10, 100 or 1,000.
Solve number and practical problems that involve all of the above and with increasingly large positive numbers.
Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value.
Using a variety of representations, including measures, pupils become fluent in the order and place value of numbers beyond 1,000, including counting in 10s and 100s, and maintaining fluency in other multiples through varied and frequent practice. They begin to extend their knowledge of the number system to include the decimal numbers and fractions that they have met so far. They connect estimation and rounding numbers to the use of measuring instruments. Roman numerals should be put in their historical context so pupils understand that there have been different ways to write whole numbers and that the important concepts of 0 and place value were introduced over a period of time.



Number – Addition and Subtraction

Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.

Estimate and use inverse operations to check answers to a calculation.

Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

Pupils continue to practise both mental methods and columnar addition and subtraction with increasingly large numbers to aid fluency.

Number – Multiplication and Division

Recall multiplication and division facts for multiplication tables up to 12×12 .

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers.

Recognise and use factor pairs and commutativity in mental calculations.

Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.

Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Pupils continue to practise recalling and using multiplication tables and related division facts to aid fluency.

Pupils practise mental methods and extend this to 3-digit numbers to derive facts, (for example $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$).

Pupils practise to become fluent in the formal written method of short multiplication and short division with exact answers

Pupils write statements about the equality of expressions (for example, use the distributive law $39 \times 7 = 30 \times 7 + 9 \times 7$ and associative law $(2 \times 3) \times 4 = 2 \times (3 \times 4)$). They combine their knowledge of number facts and rules of arithmetic to solve mental and written calculations for example, $2 \times 6 \times 5 = 10 \times 6 = 60$.



Pupils solve two-step problems in contexts, choosing the appropriate operation, working with increasingly harder numbers. This should include correspondence questions such as the numbers of choices of a meal on a menu, or 3 cakes shared equally between 10 children.

Fractions (including decimals)

Recognise and show, using diagrams, families of common equivalent fractions.

Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10.

Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.

Add and subtract fractions with the same denominator.

Recognise and write decimal equivalents of any number of tenths or hundreds.

Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.

Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.

Round decimals with 1 decimal place to the nearest whole number.

Compare numbers with the same number of decimal places up to 2 decimal places.

Solve simple measure and money problems involving fractions and decimals to 2 decimal places.

Pupils should connect hundredths to tenths and place value and decimal measure.

They extend the use of the number line to connect fractions, numbers and measures.

Pupils understand the relation between non-unit fractions and multiplication and division of quantities, with particular emphasis on tenths and hundredths.

Pupils make connections between fractions of a length, of a shape and as a representation of one whole or set of quantities. Pupils use factors and multiples to recognise equivalent fractions

and simplify where appropriate (for example, $\frac{6}{9} = \frac{2}{3}$ or $\frac{1}{4} = \frac{2}{8}$).

Pupils continue to practise adding and subtracting fractions with the same denominator, to



become fluent through a variety of increasingly complex problems beyond one whole. Pupils are taught throughout that decimals and fractions are different ways of expressing numbers and proportions.

Pupils' understanding of the number system and decimal place value is extended at this stage to tenths and then hundredths. This includes relating the decimal notation to division of whole number by 10 and later 100.

They practise counting using simple fractions and decimals, both forwards and backwards.

Pupils learn decimal notation and the language associated with it, including in the context of measurements. They make comparisons and order decimal amounts and quantities that are expressed to the same number of decimal places. They should be able to represent numbers with 1 or 2 decimal places in several ways, such as on number lines.

Measurement

Convert between different units of measure [for example, kilometre to metre; hour to minute].

Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.

Find the area of rectilinear shapes by counting squares.

Estimate, compare and calculate different measures, including money in pounds and pence.

Read, write and convert time between analogue and digital 12- and 24-hour clocks.

Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days.

Pupils build on their understanding of place value and decimal notation to record metric measures, including money.

They use multiplication to convert from larger to smaller units.

Perimeter can be expressed algebraically as $2(a + b)$ where a and b are the dimensions in the same unit.

They relate area to arrays and multiplication.



Geometry – Properties of shapes

Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.
Identify acute and obtuse angles and compare and order angles up to 2 right angles by size.
Identify lines of symmetry in 2-D shapes presented in different orientations.
Complete a simple symmetric figure with respect to a specific line of symmetry.
Pupils continue to classify shapes using geometrical properties, extending to classifying different triangles (for example, isosceles, equilateral, scalene) and quadrilaterals (for example, parallelogram, rhombus, trapezium). Pupils compare and order angles in preparation for using a protractor and compare lengths and angles to decide if a polygon is regular or irregular. Pupils draw symmetric patterns using a variety of media to become familiar with different orientations of lines of symmetry; and recognise line symmetry in a variety of diagrams, including where the line of symmetry does not dissect the original shape.

Geometry – Position and Direction

Describe positions on a 2-D grid as coordinates in the first quadrant.
Describe movements between positions as translations of a given unit to the left/right and up/down.



Plot specified points and draw sides to complete a given polygon.

Pupils draw a pair of axes in one quadrant, with equal scales and integer labels. They read, write and use pairs of co-ordinates, for example (2, 5), including using co-ordinate-plotting ICT tools.

Statistics

Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.

Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Pupils understand and use a greater range of scales in their representations.

Pupils begin to relate the graphical representation of data to recording change over time.