# Pyrford Church of England Primary School 



## Mathematical Vocabulary List 2024

## Language in Numeracy at Pyrford Primary School

This is a list of specific vocabulary that we use throughout our learning in maths, and related areas, throughout the school day. It is by no means exhaustive but is intended as an example of the rich vocabulary we encourage the children to use and understand.

Through the use of STEM sentences (sentences that include accurate mathematical vocabulary in a highly structured way) we help the children expand their vocabulary and articulate their understanding. These sentences are read aloud together as a class daily and as appropriate.

## EYFS

Place value - Numbers to five
One two three four five oneness of one twoness of two etc
How many altogether? Is the same as..

Counting beyond five - rote counting, counting in songs and nursery rhymes.
Addition and subtraction
Sorting, sorting into two groups more less equal to the same as

Number and place value - compare groups
Same different more less the same as equal to
Measurement - time
Morning afternoon before after later earlier day night week month year
Days of the week Months of the year birthday

## Year 1

Numbers to 10
sort, groups, pattern • digits, number • count on, count back, one more, one more than, one less, one less than • matched, equal to, = • fewer, less than, <, least, fewest • more, greater than, >, most, greatest • number line, number track, ten frame

## Part whole within 10

part-whole model, part, whole, groups number sentence, number bonds plus equal to, more than, less than
Addition and subtraction within 10
part, whole and part-whole altogether, in total, total, sum add, added, plus, or + count, count on, missing, missing part, number bonds, number pairs number stories
2D and 3D Shapes
2D, 3D cube, cuboid, sphere, cylinder, pyramid, cone circle, triangle, square, rectangle side, edge, face, corner pattern, repeat

## Numbers to 20

numbers 11-20 count, backwards, forwards tens, ones, more, less greatest, smallest, fewer, fewest, most, least order, compare equal to, more than, less than

## Numbers to 50

tens, ones compare, order less than (<), greater than ( $>$ ) number names and numerals to 50

## Numbers to 100

100 square, number square place value grid pattern, same, different less than, fewer, smaller, less, (<) greater than, larger, bigger, more, (>) equal to, (=) greatest, biggest fewest, smallest tens, ones, place value, partition how many?, count number bonds

## Addition

count, count on add, addition, additions, plus or + altogether, in total number bond tens, ones, number stories, represent part, whole, part-whole greater, less, how many more? Predict

## Subtraction

subtract ( - ) find the difference, how many are left? take away tens, ones number bonds, part-whole addition (+) count back fact family

## Multiplication

equal groups array row, column double, twice add, addition, adding, altogether, total

## Division

equal groups, same, different share, sharing equally, fairly, total, altogether, each division

## Fractions

half, halves, quarter equal share, split part, whole

## Introducing length and height

long, longer, longest short, shorter, shortest tall, taller, tallest length, height compare, comparison measure distance unit, non-standard units, ruler, centimetre (cm) total, difference, dead-end ruler

## Introducing weight and volume

weight, weigh capacity, volume, contains, container heavier, heaviest, lighter, lightest more, most, fewer, less, least >, <, = addition, subtraction balance scales, balanced compare, measure, estimate empty, full, amount, half

## Position and direction

turn, position, direction half turn, quarter turn, three-quarter turn, whole turn left, right, in between forwards, backwards above, below top, middle, bottom up, down

## Time

before, after, faster, slower, shorter, longer, earlier, later yesterday, today, tomorrow day, week, month, year Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday calendar, date minute hand, hour hand, second hand o'clock, half past second, minute, hour

## Money

pound, penny, pennies, pence coins, notes, banknotes $£, p$ greater than, less than, equal, total, altogether <, $>$, and $=$, greater than, less than value, worth

## Year 2

Numbers to 100
less than, fewer, smaller, less, (<) greater than, larger, bigger, more, (>) equal to, (=) greatest, biggest
fewest, smallest tens, ones how many? count, partition place value grid, part-whole model

## Addition and subtraction

part, whole and part-whole add, added, plus, total, altogether, sum, calculation, (+) count, count on, count back, less, difference subtract, take away, minus, (-) exchange, compare, greater than, less than, more, less, (>), (<) ones, tens, 10 more, 10 less, place value, column, 1-digit number, 2-digit number, number sentence, number bonds, known fact, fact family, bar model

## Multiplication and Division

equal groups, repeated addition, skip counting, number in a group, number of groups, times, times-table multiply/multiplication ( $\times$ ) more than, less than (< and >)
array rows/columns, bar model, equal parts number of equal parts, times bigger/times taller/ times greater twice as big
divide, division, the division sign $(\div)$ share group odd, even times-tables, equal groups, number of equal groups

## Fractions

fraction half (1/2), quarter (1/4), third (1/3 whole part, equal part numerator, denominator fraction bar unit fraction, non-unit fraction equivalent three-quarters (3/4) equal divided by $(\div)$ odd, even share pattern Money
money, coins, notes pounds ( $£$ ), pence ( $p$ ) change, le, right, money, buy(s), spend, step how much?, value, amount, total, altogether, parts, between, difference count on, sort, match, compare, add, addition,
calculate, subtraction great(er/est), smallest, exact(ly), higher, lower, most, least more than (>), less than (<), equal (=) part-whole model, number line, bar model

## Statistics

tally chart, tally pictogram block diagram table more, less, most, least favourite, popular equal represent, symbol, key, information total, altogether compare

## Length and Height

length, height width, distance long, longer, short, shorter tall metres ( m ), centimetres ( cm ) order, compare ruler, metre stick measure zero greater than (>) less than (<) equal to (=)

## Properties of shape

circle, semicircle oval, triangle, square, rectangle, quadrilateral polygon, pentagon, hexagon, octagon sphere, hemisphere cone, ovoid, cylinder triangle-based pyramid, square-based pyramid, pentagon-based pyramid, hexagon-based pyramid cube, cuboid triangular prism, pentagonal prism, hexagonal prism 2D, 3D properties side, vertex, vertices, edge, face pattern symmetry, symmetrical, line of symmetry, curved surface

Position and direction
quarter turn, half turn, three-quarter turn, whole turn clockwise, anticlockwise forwards, backwards left, right, up, down, turn middle position pattern above, below top, bottom between cube, cylinder circle, semicircle triangle, rectangle, square

## Time

hands, face, hour, minute, analogue o'clock, past, to, half past, quarter past, quarter to, quarter of an hour almost, same, units, last, convert, how long, le, passed, shorter, longer, fastest, slowest five, ten, fifteen, twenty, twenty-five, thirty, thirty-five, forty, forty-five, fifty, fifty-five, sixty $5,10,15,20,25,30,35,40,45$, $50,55,60$ time, start time, end time, duration, time taken, finish, forwards, backwards, twice 24 hours, day, daytime, night time, around the clock, am, pm midday, midnight, morning, afternoon

## Weight

Weigh, mass, weights, weighing scales, balance scales, heavy, light, heaviest, lightest, heavier than, lighter than, kilogram, half kilogram, gram, tonne
Capacity and volume
Millilitre, litre, capacity, measure, measuring cylinder/jug, empty, half empty, full, half full, quarter full, quarter empty, volume
Temperature
Degrees, Celsius, hot, hotter, hottest, cold, colder, coldest, warm, warmer, warmest, cool, cooler, coolest, thermometer, temperature
Problem solving and efficient methods
part, whole, part-whole add, addition, more than, + subtract, subtraction, difference, change, take away, less than, - divide, division, share, $\div$ multiply, multiplication, lots of, $\times$ altogether, groups of, total, sum, total cost representation, bar model, efficient

## Year 3

Place value within 1000
hundreds (100s), tens (10s), ones (1s) place value more, less greater than (>), less than (<), equal to (=) order, compare digit, one thousand part-whole model, place value grid, number line estimate, halfway, exchange taller, tallest, longest, shortest, greatest, smallest, most, least, fewest

## Addition and Subtraction

add, addition subtract, subtraction, take away, difference exchange, pattern, variation, column method, mental method, part-whole model, number line total, altogether, calculations, regroup, partition, solutions place value, number bonds, fact family, related facts, number statements, method, order hundreds (100s), tens (10s), ones (1s), digits, zero (0) multiple of 10 , multiples of 100, 3-digit number, 2-digit number, 10 ones, 10 tens left, greater than (>), less than (<), fewer, more, metres ( m ), miles, centimetres ( cm ), symbol, efficient method function machine inverse

## Multiplication and Division

equal groups, unequal groups, shared equally multiply ( $\times$ ), multiplication statement, multiplication fact, multiplication sentence, divide ( $\div$ ), division statement, division fact times-table group, share whole, left over, remainder one-step, two-step, multi-step array, bar model, number line pattern count up, total, double, method repeated addition, equal remainder share partition tens (10s) ones (1s) exchange inverse

## Fractions

part, whole, equal parts, fraction, unit fraction, non-unit fraction, denominator, numerator partition, split, share, group, interval, combine, count on, count back, represent halves, thirds, quarters, fifths, sixths, sevenths, eighths, ninths, tenths, elevenths, twelfths mixed number, whole number, fractional part, integer, set of objects
partition, split, share, count on, count back, compare, measure, calculate, method whole number, add, subtract, difference, multiply, divide, equal to, greater than ( $>$ ), less than (<)

## Money

pounds ( $£$ ) and pence ( p ) convert total difference change

## Statistics

pictogram ,key, symbol, compare, least, most altogether bar chart horizontal axis, vertical axis scale halfway between table row, column order smallest, largest total

## Length

millimetres ( mm ), centimetres ( cm ), metres ( m ) measure, measurement length, height, width, distance, diagonal how long? how wide? how tall? how high? ruler, metre stick, metre ruler longer, shorter, longest, shortest, furthest perimeter addition, subtraction, find the difference, repeated addition, multiplication greater than (>), less than (<) polygon, quadrilateral, triangle, rectangle compare, convert, equal, equivalent, ascending, predict, calculate, expression, method
Time
month, year, leap year January, February, March, April, May, June, July, August, September, October, November, December day, hour, minute, second midnight, midday/noon hour hand, minute hand, past, to, half past, o'clock, quarter past, quarter to, Roman numerals longer, shorter, the same, units, last, convert, how long left, passed, fastest, slowest 12-hour clock, 24-hour clock start time, end time, duration, time taken, finish, forwards, backwards, twice daytime, night time, around the clock, am, pm morning, afternoon, evening, night.

## Angles and properties of shape

right angle, quarter turn, half turn, acute angle, obtuse angle vertical, horizontal, parallel, perpendicular triangle, quadrilateral, square, rectangle, trapezium, rhombus, kite, pentagon, hexagon cube, cuboid, sphere, pyramid, prism, cylinder, cone, triangular prism, square-based pyramid, tetrahedron describe, property, 2D, 3D, draw accurately, construct

Mass
mass, weigh, measure, grams (g), kilograms (kg) interval, scale

Capacity
capacity, amount, measurement litres (I), millilitres (ml) scale, number line, interval compare, convert, order

## Year 4

Place value 4-digit numbers
tens (10s), hundreds (100s), thousands (1,000s) rounding, counting, represent, compare, order more than ( $>$ ), less than (<) partition, recombine, numerals, nearest, distance, negative, positive step ascending, descending

## Addition and subtraction

addition, subtraction total more than, less than, difference, exchange column method estimate, accurate, efficient, exact strategy diagram

## Multiplication and division

times-table, times, times by multiply ( $\times$ ), multiple, multiply by divide ( $\div$ ), divide by grouping, groups of, lots of, sets of, grouped, $x$ groups of $y$ sharing, share, equal, equally number facts, number sentences, multiplication facts/ sentences, division facts/sentences, fact family ones (1s), tens (10s), hundreds (100s), zero (0), how many, total, method, calculation, exchange, solve, less then (<), greater than (>), added, sort, sum, recall, times-tables whole, leover, remainder one-step, two-step, multi-step array, bar model, partwhole model, inverse

## Fractions

tenth, hundredth equivalent fraction improper fraction, mixed number simplify, simplest fraction numerator, denominator fraction, whole number, mixed number, proper fraction, improper fraction add (+), subtract ( - ), multiply $(\times$ ), divide $(\div)$, sign, greater than ( $>$ ), less than (<) whole, part, find ... of ... fraction strip, represent, number line, diagram, problem solving
Decimals
decimal point, whole, tenths, hundredths, $0 \cdot 1,0 \cdot 01$ integer, tenths column, hundredths column one more, one less, increase, decrease divide, regroup, equivalent, partition
greater than (>), less than (<), equal to (=), smallest, lightest, greatest, heaviest, capacity order, compare, statement, ascending, convert part-whole, place value, bar model

## Measure - perimeter

kilometres, metres, centimetres convert, equivalent to perimeter, distance, around total length, width square, rectangle, rectilinear shape

Measure - area
area, space, inside, units, rows length, width, measure shape, triangle, square, rectangle, trapezium, rectilinear shape, 2D shapes larger, more area, smaller, less area, least area, greatest area right angle counting, subtraction reflection, rotation compare, order, size

## Money

notes coins pounds ( $£$ ) pence ( p ) add ( + ) subtract ( $(-)$ change round to the nearest order greater than ( $>$ ) less than (<) cheaper more expensive estimate over-estimate, under estimate total

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Time
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seconds, minutes, hours, days, weeks, months, years units of time convert, equal to (=), compare 12-hour, 24-hour, am, pm analogue, digital bar model

## Statistics

table, line graph, bar chart, pictogram discrete data, continuous data operation altogether, more than, greatest, smallest, compare

## Angles and 2D shapes

angle, acute, obtuse, right angle, quarter turn, half turn, interior angles, exterior angles quadrilateral, square, oblong, rectangle, rhombus, parallelogram, trapezium, pentagon, hexagon, octagon, hexadecagon, kite arrowhead, polygon, circle triangle, isosceles, equilateral, scalene regular, irregular, side length, length, perimeter symmetrical, symmetry, line of symmetry, horizontal, vertical, diagonal, reflective, sequence, pattern sort, group, compare, order, properties shape, vertices, parallel

Geometry, Position and Direction
coordinates position horizontal, vertical up, down left , right square, rectangle vertex, vertices

## Year 5

Place value within 100,000
ones (1s), tens (10s), hundreds (100s), thousands (1,000s), ten thousands (10,000s) place value, position partition, equivalent estimate, closer to, between round next multiple, previous multiple, nearest multiple of $10,100,1,000$ or 10,000 compare, order, greater than (>), less than (<) Roman numeral

Place value within 1,000,000
place value ones (1s), tens (10s), hundreds (100s), thousands (1,000s), ten thousands (10,000s), hundred thousand $s(100,000 s)$, million $(1,000,000)$ partition, partitioning number line, count negative number, positive number minus rounding, round up, round down estimate compare, order sequence, rule ascending, descending less than (<), greater than (>), nearest.

## Addition and subtraction

Addend subtrahend, minuend
add, subtract 1s (ones), 10s (tens), 100s (hundreds), 1,000s (thousands), 10,000s (ten thousands) total difference inverse round mentally estimate efficient

## Multiplication and Division

multiple factor prime number composite number square (x2) cube ( $x 3$ ) multiply, multiplication, times divide, division inverse operation place value ones, tens, hundreds, thousands, tens of thousands factor tree
total, sum, remainder, place value, partition multiply, divide, add, subtract factor, multiple

## Fractions

Equivalent, numerator, denominator whole, fraction simplify, expand multiply ( $\times$ ), divide $(\div)$, multiplication, division, multiple, factor remainder improper, mixed number convert greater than ( $>$ ), less than (<), equal to (=) divisor, dividend, quotient
equivalent add, sum, total, subtract, difference divide, multiply, multiple numerator, common denominator simplify, convert proper fraction, improper fraction, mixed number method, multi-step, efficient factor, multiple

## Decimals

add, subtract, multiply, divide ones, tenths, hundredths, thousandths difference, group, share, compare, represent decimal, decimal point, decimal place, digit column, place value, exchange mass, weight, length, width, cost, height

## Decimals and percentages

decimal place, tenths hundredths, thousandths, decimal point place value digits fractions per cent (\%) rounding improper fractions mixed numbers convert exchange

## Graphs and tables

line graph, dual line graph horizontal axis, vertical axis, axes, scale data, information read, interpret, complete, table, two-way table.

## Area and perimeter

perimeter, distance, area, space scale, actual area/actual size, convert centimetres (cm), metres (m), square centimetres (cm2), square metres (m2) rectangle, square, rectilinear shape, sides, length, width measure, combine, brackets, total, double, estimate, array compound shape composite shape

Geometry - properties of shapes
angle, turn whole turn, half turn, quarter turn acute angle, right angle, obtuse angle, reflex angle degrees ( ${ }^{\circ}$ ) 90 degrees 180 degrees, 360 degrees interior angle protractor parallel perpendicular angle, right angle, interior angle grid regular, irregular polygon, quadrilateral 2D, 3D viewpoint

## Geometry - position and direction

reflection, translation mirror line coordinate, horizontal coordinate, vertical coordinate horizontal axis, vertical axis

Measure - converting units
mass, capacity, length, time, quantity metric units, gram, kilogram, millilitre, litre, millimetre, centimetre, metre, kilometre imperial units, ounce (oz), pound (lb), stone (st), pint (pt), gallon, inch (in), foot (), yard (yd) second, minute, hour, day, week, month, year convert, equal to, equivalent, approximately, per, measure, remainder, multiple timetable, 24-hour, digital, duration

Measure - volume and capacity
volume, capacity, solid, liquid, container cube, cuboid, triangular, prism 3D shapes, objects calculate, estimate, compare, count, accurately, order, amount, irregular, prediction, exact unit (cm) cubes, units of measurement, measure less, more, less than (<), more than (>), largest, smallest, least, greatest, equal space inside height, length, width, size, tall layer, slice multiple, total, take away, whole, part, almost half, identical litre (I), millilitre (ml)

## Year 6

Place value within 10,000,000
ones (1s), tens (10s), hundreds (100s), thousands (1,000s), ten thousands (10,000s), hundred thousands $(100,000 \mathrm{~s})$, millions $(1,000,000 \mathrm{~s})$, ten million $(10,000,000)$ place value partition/partitioned/partitioning interval estimate compare/comparison/comparing order/ordering less than (<), greater than ( $>$ ), equal to (=) rounding/rounded/round up/round down/rounds negative, positive odd, even accurate/accurately, exactly, approximately

## Four operations

add, subtract, sum, total, difference method, column, columnar multiply, multiplication, product, approximation divide, division, short division, long division factor, multiple, divisor, dividend, remainder inverse grid method fraction, simplify, numerator, denominator
factor, common factor multiple, common multiple prime squared (x2), cubed (x3) order of operations, brackets inverse operation

## Fractions

whole, part numerator, denominator, common denominator equivalent simplify, simplest form factor, highest common factor, lowest common multiple compare order, ascending, descending less than, greater than proper fraction, improper fraction mixed number convert
whole number whole, part order of operations

## Decimals

multiply ( $\times$ ), divide ( $\div$ ) decimal placeholder place value, tenths, hundredths, thousandths factor, multiple, product group, share numerator, denominator convert, simplify, equivalent divisor, dividend, quotient, remainder

## Percentages

per cent (\%), percentage parts, whole decimal fraction, equivalent fraction, tenth, hundredth, half, quarter less than $(<)$, greater than ( $>$ ) divide ( $\div$ ), share, multiply $(\times$ ) convert, compare, order, simplify

## Algebra

pattern, growing pattern, sequence rule term algebra, algebraic expression formula, formulae substitute generalise operation calculation, calculate equation inverse solution represent value

## Position and direction

plotting, coordinates, quadrant, point, axis, $x$-axis, $y$-axis, grid, $x$-coordinate, $y$-coordinate vertices, vertex, square, side, rectangle, triangle, equilateral, oblong, shape, irregular, hexagon, identical, similar, parallelogram perimeter, metre (m), distance, length, long horizontal, vertical halfway, line, properties, value, reason negative, positive translation, reflection, original, le, down, up, right, mirror, away, diagonal

Measure - imperial and metric measures
units (of measure/ment), metric, imperial, length, mass, volume, capacity, distance measure, convert, equal, equivalent, approximate, smaller (unit), larger (unit), for every, ratio millimetres ( mm ), centimetres ( cm ), metres (m), kilometres (km), grams (g), kilograms (kg), millilitres ( ml ), litres (I) inches (in), feet (), ounces (oz), pounds (lbs), pints, miles, gallons, yards digits, decimal conversion table, conversion graph.

## Perimeter, area and volume

perimeter, distance, area, space, volume centimetres ( cm ), metres ( m ), square centimetres ( cm 2 ), square metres (m2), cubic centimetres (cm3), cubic metres (m3) rectangle, square, triangle, rectilinear shape, sides, length, width, parallelogram, cube, cuboid measure, combine, total, double, estimate.

## Geometry - properties of shape

degrees, measurement, length angle, obtuse, acute, reflex, right angle, interior protractor, baseline, crosshairs, scale vertex, edge, face parallel properties triangle, isosceles, equilateral, scalene regular,
polygon, quadrilateral, parallelogram, kite, rhombus, trapezium diameter, radius, circumference, concentric, centre perimeter pyramid, tetrahedron, cylinder, prism, cuboid, cube

Problem solving
partition estimate, round, compare equivalent, common denominator percentage, ratio, proportion, convert coordinates, vertex (vertices), reflection, translation sum of interior angles

## Statistics

average, mean, set, share pie chart, segment, whole, section, degree, angle, right angle tally chart, bar chart fraction, percentage line graph, axis/axes, estimate, accurate, interpret, increase, above, below, zero (0), value, $x$-axis, $y$-axis, minus ( - ), between, plot, point, vertical, horizontal, construct, convert/conversion, straight, equivalent, predict, curve more, equal, even, size, total, share, great(erest), calculate, divide, highest, compare, lowest, group, data, represent, balance, odd, different/difference, least, inverse, operation, advantages, disadvantages, largest, half, scale, quarter, frequency, smallest, part, same, more, category, results, exact

