

MALIN BRIDGE PRIMARY SCHOOL

Maths Agreed Language



EYFS1 - Y6

RATIONALE

Vocabulary understanding is a major contributor to overall comprehension in many content areas, including mathematics. Teaching and learning **the language of mathematics** is vital for the development of mathematical proficiency. Students' mathematical vocabulary learning is a very important part of their language development and ultimately mathematical proficiency.

Pupils should be taught precise mathematical language throughout school so they can fully express their **mathematical thinking**.



GLOSSARY

*Please find below definitions of some of the mathematical terms used across school.
All classrooms should have a maths dictionary for further clarification.*

TERM	DEFINITION
unit fraction	A fraction with a numerator of one; non-unit fractions are fractions with numerators other than 1.
units	This is often used colloquially to mean the ones column, however 'unit' should only refer to a unit of measure e.g. minutes, kg, mm etc.
vinculum	The horizontal line used to separate the numerator and denominator in a



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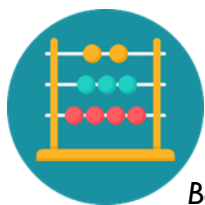
TERM	DEFINITION
prime number	A whole number that has exactly two factors, itself and one. E.g 5 (factors 5 and 1), whereas 57 is not prime (factors 57, 19, 3, 1).
product	The result you get when you multiply two or more numbers.
proof	A formal mathematical argument that shows why a statement is always true.
quotient	The result after you divide the dividend by the divisor, for example in ' $12 \div 3 = 4$ ', 4 is the quotient.
ratio	A comparison of two qualities by division which can be expressed as 'a to b, a/b or a:b'
regroup	To re-combine a set into different groups e.g. twelve ones can be reorganised into one ten and two ones.
remainder	A number left over when an integer is divided by another.
rounding	A method used to approximate a number to the nearest appropriate power of ten, for example, 11.74: $11.74 \approx 11.7$ (rounded one decimal place) $11.74 \approx 12$ (rounded to the nearest whole number) $11.74 \approx 10$ (rounded to the nearest multiple of ten).
skip counting	The method of counting by equal intervals
sum	The result of adding two or more numbers. This is often used colloquially to mean any calculation, but 'sum' should only be used for addition.



EYFS 1

Below is a list of words which should be introduced EYFS 1.

UNIT	USE	AVOID
Number Sense	more, less, number, objects, numeral, count, how many, one, two, three, four, five, six, seven, eight, nine, ten, hundreds	units
Addition & Subtraction	total, add, subtract, lots, fewer, one more	bigger, smaller
Multiplication & Division	equal, unequal, same, shared	
Measures	tall, long, longer, longest, short, shorter, shortest, heavy, light, full, empty, length, weight, capacity, time, money, coin	
Shape	bigger, smaller, round, sphere, box, shape, symmetry, pattern Also see geometry policy	diamond, star
Position & Direction	in, on, inside, under, behind, on top	



EYFS 2

Below is a list of words which should be introduced in EYFS2.

Please also note the EYFS1 word list.

UNIT	USE	AVOID
Number Sense	same numbers, different numbers, counting, number line, digit, order, ones, tens, zero	units
Addition & Subtraction	more, less, the same, count on, zero, number bond count back, nearly, equal, unequal, is equal to, add, more, make, total, altogether, one more, two more etc. one less, two less etc. fewer, take away, difference between, is the same as	bigger, smaller sum (when used for subtraction)
Multiplication & Division	share, sort, count, double, halve, more than, less than, of	
Measures	size, compare, measure, guess, estimate, days, week, month, birthday, now, soon, early, before, next, last, newest, oldest, too much, not enough, too many, too few, coin, pence, price, penny, pay, full, half full, nearly empty, heavy, light	
Shape	pattern, flat, curved, round, corner, side, edge, make, draw, solid, whole, circle, triangle, square, rectangle, pentagon, hexagon, cube, pyramid, sphere, cone Also see geometry policy	diamond, star
Position & Direction	above, below, inside, outside, through, around, behind, in front, in, on, under, next to, up, down, on top of, forwards, backwards	



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TERM	DEFINITION
median	A measure of centre that identifies a value such that half the data is above the value and half below when the data is listed in order.
mixed number	A number represented by a whole number next to a fraction and is equal to the sum of the whole number and the fraction.
more/fewer and greater/less	More and fewer are used when we talk about discrete data, i.e. objects that can be counted using positive whole numbers. Greater and less are used when we talk about continuous data, i.e. data that can take any value within a range.
multiple	A number into which a given number may be divided with no remainders. The result of multiplying a number by an integer, for example, 12 is a multiple of 3 and 4 because $3 \times 4 = 12$.
number bond	A way of representing a number using a part-part-whole model; for example, if 3 and 7 are the parts, then the whole is ten.
numerator	The number of equal parts of a total number of parts in a fraction. This is the top number in a fraction e.g. $\frac{2}{3}$ has a numerator of 2.
ones	Refers to the place value column between 'tens' and 'tenths' (as the use of the word 'units' is unnecessary and may be confusing; the 'unit' refers to the type of measure – cm, kg, etc., whereas we count in 'ones'.)
partitioning	A way of breaking a number into at least two parts resulting in a number bond for that number, for example, 12 is equal to ten and two.
percent	A ratio that calculates the parts per 100 e.g. 20% is 20 parts out of 100 or $\frac{20}{100}$
prime factor	All the factors of a quantity that are only divisible by the number 1 and itself e.g. the prime factors of 42 are 7, 3 and 2.

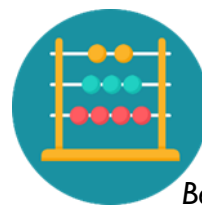


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TERM	DEFINITION
estimation/ estimate	Make an approximate calculation, often based on rounding.
exchange	Mainly used in subtraction to describe replacing a number with something of the same value e.g. One ten with ten ones. When subtracting, a ten is exchanged for ten ones. <u>This can also be used in addition</u> if, for example, you have a total of ten in the ones column you exchange the ten ones for a ten.
expression	Numbers, symbols and operators grouped together but without the 'equal to' sign, for example, ' 5×3 or $6 - 1$ '.
factor	A number, that when multiplied with one or more other factors, makes a given number; for example, 2 and 3 are factors of 6 because $2 \times 3 = 6$.
fraction	A number written in the form of a ratio.
fractional part or unit	A part of a whole or a part of a group.
improper fraction	A fraction in which the numerator is greater than the denominator.
integer	A positive or negative whole number or zero.
interval (on a measurement scale)	The space between two divisions on a scale, which represents a specific amount of what is being measured. The known interval between labelled divisions can be used to calculate the unknown intervals between unnumbered divisions.
mean	A measure of centre where the sum of a set of numbers is divided by the number of elements in the set (also known as <i>average</i>)

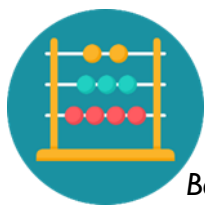


YEAR 1

Below is a list of words which should be introduced in Year 1.

Please also note the previous word lists.

UNIT	USE	AVOID
Number Sense	tens, ones, columns, digits, value, estimate multiple, number, more than, less than, skip counting	units, guess bigger, smaller, any mention of crocodiles whatsoever use images to support eg. 
Addition & Subtraction	add, subtract, take away, find the difference, is equal to, the same as, part, whole, number bond	equals
Multiplication & Division	array, multiply, groups of, fraction, half, quarter, is equal to, divide, divided into, sharing, grouping, division	equals, times, timesing, divided by, dividing by
Measures	minute, hour, second, half past hour hand, minute hand, O' Clock Names of months and seasons quicker, slower, earlier, later, long/short, longer/shorter, tall/short, double/half, full/empty, more than, less than, half full, quarter, heavy/light, heavier than, lighter than, pounds, pence, pennies, coins, notes	big hand, little hand
Shape	square, rectangle, circle, triangle, sphere, cube, cuboid, pyramid, rhombus Also see geometry policy	diamond, star
Position & Direction	beside, beneath, between, left, right, North, South, East, West	



YEAR 2

Below is a list of words which should be introduced in Year 2.

Please also note the previous word lists.

UNIT	USE	AVOID
Number Sense	value, digit, columns, ones, tens, hundreds, thousand, greater than, less than, compare, order, consecutive, place value, represents, value, worth, exchange, sequence	units bigger, smaller, any mention of crocodiles
Addition & Subtraction	sum of, minus, exchange, commutative, commutation, inverse, opposite, problem solving, reasoning, equation, calculation	sum (if used for subtraction), put the highest number first (when subtracting), equals
Multiplication & Division	repeated addition, multiplication, division, sharing, share equally, grouping, odd, even, skip counting, multiple	timesing, timesed by, pizza method for division, divided by, dividing by
Fractions, Decimals, Percentages, Ratio & Proportion	quarter, half, third, equivalent, fraction, whole, part, equal, unit fraction	fractions as cakes, pizzas, round things in general (Use as wide a range of models as possible, in the same lesson. eg. shaded number lines, bar modelling, 3D shapes)
Measures	greater than, less than, metre, centimetre, divisions (on a measurement scale) buy, sell, how much, cheaper than, combine, change, litres, millilitres, capacity, temperature, centigrade, scale, thermometer, divisions (on a scale), mass, quarter to/past	bigger, smaller weight big hand, little hand
Shape	faces, edges, vertices, quarter turn, half turn, clockwise, anti-clockwise, rotate Also see geometry policy	diamond, star
Statistics	tally, pictogram, total, chart, information, data	



GLOSSARY

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TERM	DEFINITION
congruent	Having the same shape and <u>exactly</u> the same size. See geometry policy
decimal fraction	A proper fraction whose denominator is a power of 10.
decimal point	A demarcation point to separate whole numbers from values less than 1 in the base 10 number system.
denominator	The bottom part of a fraction that indicates the number of equal parts into which the whole is divided, e.g. 4 in the fraction $\frac{1}{4}$.
difference	The answer obtained using the operation of subtraction.
digit	The ten symbols used in the base-ten numeration system; 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9.
dividend	The amount that you want to divide, for example, in ' $12 \div 3 = 4$ ', 12 is the dividend.
Division (on a measurement scale)	The mark or line that denotes where a specific value is measured. Labelled divisions are usually larger, with unnumbered intermediate and smaller divisions provided to allow for greater accuracy.
divisor	The number you divide by, for example, in ' $12 \div 3 = 4$ ', 3 is the divisor.
equal to	We refer to quantities being 'equal to' each other rather than 'equals' as this emphasises the fact that equality works in both directions e.g. consider the equation ' $4 + 1 = 3 + 2$ '. Both sides of the equation are 'equal to' each other, as both give the result 5.
equation	Says that two things are equal. It will have an 'equal to' sign, for example, ' $8 - 3 = 5 \times 1$ '.
equivalent	Having exactly the same value, e.g., $12 \div 2 = 4 + 2$.

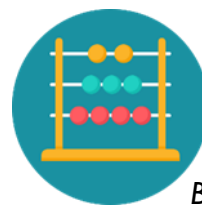


GLOSSARY

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TERM	DEFINITION
addend	A number used in the mathematical operation of addition E.g. '6 + 8 = 14', 6 and 8 are addends.
algebraic notation	An algebraic description written in terms of numbers, symbols and variables. E.g. $4a + 3b = 10$
algorithm	A set of step-by-step instructions for completing a task.
approximation	The number is not exact but is close, for example, if a journey takes 57 minutes, you might say that it takes approximately one hour.
area	A two dimensional space measured by the number of non-overlapping unit squares that fit into the space.
common denominator	A number divisible by all the denominators in a set of fractions.
common factor	A whole number that will divide exactly into two or more given numbers without leaving a remainder.
common multiple	A whole number multiple of two or more given numbers E.g. 48 is a common multiple of 2,3 and 4.
commutative property	Addition: $a + b = c$ and $b + a = c$ The addition of terms in any order provides the same sum . Multiplication: $a \times b = c$ and $b \times a = c$. The multiplication of terms in any order give rise to the same product .
composite number	Positive integers having three or more whole number factors, e.g. 12 because it has the factors 1, 12, 3, 4, 2 and 6. 7 is not a composite number as it only has the factors 1 and 7, therefore it is a prime number .

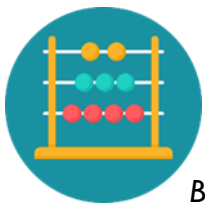


LKS2

Below is a list of words which should be introduced in LKS2.

Please also note the previous word lists.

UNIT	USE	AVOID
Number Sense	numerals, roman numerals, ten thousands, hundred thousands, millions, property, classify, integer, round to the nearest, justify, proof, decimal point	bigger, smaller, equals, more, less,
Addition & Subtraction	increase, decrease, column addition, column subtraction, integer, estimate	sum (used for anything other than addition)
Multiplication & Division	divisor, dividend, quotient, scaling, integer, inverse, product, factor, divisible, divisibility, common multiple	timesing, timesed by, moving the decimal point, divided by, dividing by
Fractions, Decimals, Percentages, Ratio & Proportion	numerator, denominator, vinculum, whole, unit fraction, hundredths, tenths, sevenths, sixths, thirds, bar modelling, equivalent, decimal, decimal places, decimal fraction, whole number	fractions as cakes, pizzas, round things in general (Use as wide a range of models as possible, in the same lesson. eg. shaded number lines, bar modelling, 3D shapes)
Measures	perimeter, kilometre, metres, distance, convert, area, squared, rectilinear, analogue, digital, leap year, roman numerals, 12-hour, 24-hour, duration, convert, millennium, fortnight, volume, kilo, centi, milli (as thousand, hundredth and thousandth equivalent)	big hand, little hand weight
Shape	quadrilateral, agreed names for 2D and 3D shapes (see geometry policy), angles, right angle, parallel, perpendicular, acute, obtuse, reflex, polygon, regular, irregular, congruent	diamond, star mirror line
Position & Direction	coordinates, origin, NSEW, NE, SE, SW, NW, quadrant, symmetry, translation, orientation	
Statistics	more, fewer, bar chart, scale, interpret, axes, axis, horizontal, vertical, discrete, continuous, Venn	



UKS2

Below is a list of words which should be introduced in UKS2.

Please also note the previous word list.

UNIT	USE	AVOID
Number Sense	ascending, descending, approximation, approximately, negative integers, estimation, ten millions, hundred millions, margin of error, acceptable error, linear	the use of minus to mean negative eg. 'minus' 5 should be negative 5.
Addition & Subtraction	BODMAS - brackets, indices, division/multiplication, addition/subtraction	more, less, sum (to mean anything other than addition)
Multiplication & Division	BODMAS, prime numbers, square numbers, cubed numbers, composite numbers, common factor, mean, median	timesing, timesed by, moving the decimal point, divided by, dividing by
Fractions, Decimals, Percentages, Ratio & Proportion	proper fraction, improper fraction, mixed number, reduce to, cancel, conversion, equivalency, hundredth, thousandths, scale up/down, per cent, percentage, equivalence, sector	fractions as cakes, pizzas, round things in general (Use as wide a range of models as possible, in the same lesson. eg. shaded number lines, bar modelling, 3D shapes)
Algebra	BODMAS, algebra, algebraic, inverse	
Measures	metric, imperial, inches, feet, pounds, ounces, pints, gallons, equivalencies, squares, breadth, vertically opposite angles	big hand, little hand weight
Shape	agreed names for 2D and 3D shapes (see geometry policy), radius, diameter, circumference, 1 st , 2 nd , 3 rd , 4 th quadrants, plot, origin, geometry, geometric	diamond, star mirror line
Statistics	database, line graph, maximum/minimum value, Carroll diagram	

GLOSSARY



SECTION