Maths Vocabulary Support Booklet

The aim of this booklet is to help parents to understand and use the technical maths vocabulary accurately and confidently so you can help your children to do the same.

This booklet is organised in the 5 teaching blocks from the old National Curriculum however all of the vocabulary is still relevant.

If there are any further words or phrases that you are unsure of then please do one of the following things:
1: ask me (Mrs Stroud) for a definition
2: look it up in a maths dictionary
3: go on
http://www.mathsisfun.com/definitions/index.html
There are loads of maths vocab definitions here!

Counting, Partitioning and Calculating

NB: I have only written down vocab from this unit that might not be obvious. Each successive year groups needs to know vocab from ALL previous year groups.

Year 1

Number sentence e.g. 6 + 4 = 10

Sum means add only

Difference means subtraction

Year 2

Partition means split the number into the values of each digit e.g 120 is 100 and 20

Calculate means work it out

Tens boundary means a multiple of 10 for example 12 + 9 crosses a tens boundary as the answer is greater than 20 which is the next multiple of 10 from 12.

Operation means add, subtract, multiply or divide. These are the 4 main operations in maths.

Year 3

Digit means a numerical symbol (1 2 3 4 5 6 7 8 9 0) A number is made up of digits. A digit is not a number. They are different.

Year 4

Calculation means using an operation to work out an answer.

Product means multiply.

Tenths means the value of the digit in the column directly after the decimal point for example the number 6.78 contains 7 tenths.

Hundredths means the value of the digit in the 2nd column after the decimal point for example the number 6.78 contains 8 hundredths.

Quotient means the number obtained as the result of a division calculation. For example the quotient of 45 and 3 is 15.

Year 5

Consecutive means next door numbers without gaps e.g. 14, 15 and 16 are consecutive

Ascending means ordering a set of numbers from smallest to biggest

Descending means ordering a set of numbers from biggest to smallest

Integer means a whole number

Year 6

Equation a maths statement where 2 sides are equal e.g. 2 + 2 = 4

All of the above

Other important information

The decimal point DOES NOT MOVE

Securing Number Facts and Understanding Shapes

Year 1

Number sentence means a story made out of numbers or an equation e.g. 4 + 6 = 10 or 17 – 3 = 14

Operation means add, subtract, multiply or divide. These are the 4 operations in maths.

Digit means a numerical symbol (1 2 3 4 5 6 7 8 9 0) A number is made up of digits. A digit is not a number. They are different.

Sum means add and only add! 4 x 6 is not a sum **it is a calculation**!

Year 2

Calculate means work it out

Calculation means use one of the 4 operations to create number sentences

Difference means subtract

Multiple means a number in a particular times table e.g. 50 is a multiple of 10 as it is in your 10 x table.

Year 3

Inverse means the opposite e.g. addition is the inverse of subtraction

Estimate means make a sensible guess e.g. 16 x 9. Estimate it will be slightly less than 16 x 10 which is 160

Approximate means a logical answer that is not accurate e.g. 1.2 x 4.9 will be approximately 5 as 1 x 5 = 5

Quadrilateral means a 4 sided shape

Vertex means a point where 2 sides or 2 edges meet (used for 2D and 3D shapes) Plural: **vertices**

Year 4

Quotient means the number obtained as the result of a division calculation. For example the quotient of 45 and 3 is 15.

Factor means a whole number (integer) that will divide exactly into another number without any remainders e.g. 5 is a factor or 10

Divisor means the quantity by which another quantity is divided
e.g. in 17 ÷ 4, the 4 is the divisor

Regular means the sides and angles of a shape are all equal

Irregular means the sides and angles of a shape are not all equal

Concave means a shapes that curves inwards e.g. the inside of a sphere

Convex means a shape that curves outwards e.g. the outside of a sphere

Polygon means a 2D shape with 3 or more sides

Year 5

Equation a maths statement where 2 sides are equal e.g. 2 + 2 = 4

Integer means a whole number

Square Number means the answer to a number times itself e.g. 64 is square as it is the answer to 8 x 8

Parallel means two sides that will not get any closer together or any further apart. E.g. a square has 2 sets of parallel sides

Perpendicular means 2 lines that will cross at right angles

Angle means a measurement of a turn

Acute means an angle less than 90 degrees

Obtuse means an angle greater than 90 but less than 180 degrees

Origin means the point mark (0,0) on a graph or co-ordinates grid

Formula means a statement, usually an equation that states a rule, fact or principle e.g. Length x width = area

Prime Number means a number with only 2 factors, 1 and itself e.g. 23 has only 1 and

Prime Factor means a factor of a number that is also prime. For example, the following numbers are all factors of 36 – 1, 2, 3, 4, 6, 9, 8, 16, 32. The prime factors are 2 and 3.

Circumference means the distance around the outside of a circle

Diameter means the distance across the middle of the circle
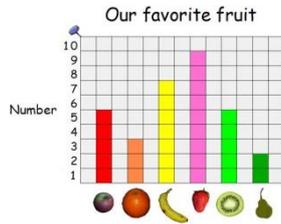
Radius means the distance from the edge of the circle to the centre

Product means multiple. The product of 4 and 3 is 12.

Handling Data and Measures

Year 1

Block graph means a simple bar graph made from blocks

Our favorite fruit

Pictogram means a graph where picture represent the data. For example if recording eye colour you could draw coloured eyes to pile up to make a graph. You can also extend the task by one car on the graph representing 2 cars in real life, so half a car on the graph would equal one real car.

March 2002 Weather
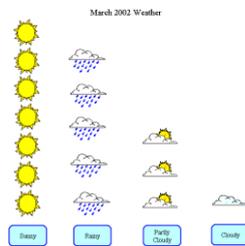
Capacity means the maximum amount that can be contained in something

Year 2

Calculate means work it out

Tally means count using a bar and gate

Year 3

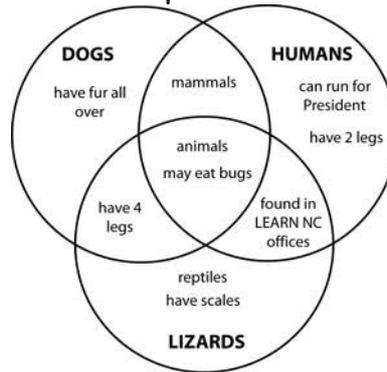**Frequency** table shows the number of times that certain things e.g. marks, occur within a set of data

Mark	Tally	Frequency
4	II	2
5	II	2
6	IIII	4
7	HHl	5
8	IIII	4
9	II	2
10	I	1

Carroll Diagrams sort data using a yes/no system

	striped	~~striped~~
red		
~~red~~		

Carroll diagram

Venn Diagrams sort data using relationships between the set of data being sorted.

Interval means the marks on a scale are of a known and consistent value. For example a scale may be marked in intervals of 1 year or 5cm etc

Year 4

No additional vocab

Year 5

Probability is a measure of how likely something is. It is measured on a scale from 0 – 1. 0 means impossible, 1 means certain and 0.5 means a 50-50 chance.

Mode means the most commonly or frequently occurring number within a set. For example: 2, 5, 7, 3, 4, 2, 6, 3, 3, 4, 2, 6, 2. The mode of this set of data is 2 as it occurs the most.

Year 6

Range means the difference between the highest and lowest numbers in a set of data e.g. Data showing shoe sizes: 3, 6, 4, 7, 2, 5, 4, 3, 6, 4
There is a range of 5 shoe sizes from 2-7.

Mean means the average of a numerical set of data. It is calculated by adding up all of the amounts within the set of data and dividing your total by the amount of numbers added. For example:

2, 4, 5, 6, 6, 2, 3, 2, 5, 6   Mean = (2 + 2 + 2 + 3 + 4 + 5 + 5 + 6 + 6 + 6) ÷ 10
$$= 41 ÷ 10$$
$$= 4.1$$

Median means the middle number when a set of data is put in either ascending or descending order. With an odd set of data it is simply the middle number, in an even set of data, add the 2 middle numbers and divide by 2. For example: 3, 4, 1, 5, 7, 3, 4, 9, 2, 1
1, 1, 2, 3, 3, 4, 4, 5, 7, 9 leaves 3 and 4 in the middle. (3 + 4) ÷ 2 = 3.5

Average means finding either the mode, median or mean of a set of data

Calculating, Measuring and Understanding Shape

Number sentence means a simple equation using numbers and symbols e.g. 3 + 4 = 7

Sum means add

Total means add

Altogether means add

Difference means take away

Year 2

Operation means +, -, x or ÷

Multiple of means in the times table of. For example 20 is a multiple of 5 as it is in the 5 x table

Inverse means the opposite. For example + is the opposite operation to –

Year 3

Product means multiply for example the product of 6 and 2 is 12

Remainder means the number that is left over if a number does not divide exactly by another

Fraction means part of a whole. If a whole is split into sixths then the whole will now consist of 6 equally sized pieces.

Diagonal means a straight line that joins to non-adjacent vertices (corners) within a shape
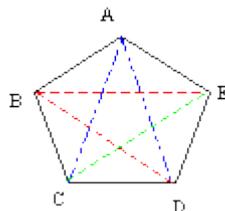
Ascend means go up

Descend means go down

Interval means the marked division of a scale that are of an equal and known value

Capacity means the amount something can hold, usually measured in ml or l

Year 4

Decimal point means the point or dot used to separate the whole number part of a decimal number from the fractional part

Perimeter means the distance around the outside of a 2D shape

Area means the space within the perimeter of a 2D shape. The formula for the area of a rectangle is length x width

Year 5

Quotient means the answer once you have divided one number by another
For example: div   end ÷ divisor = quotient   12 ÷ 3 = 4   4 = quotient

Acute means an angle less than 90°

Obtuse means an angle greater than 90° but less than 180°

Parallel means the same distance apart, never touching

Perpendicular means at right angles (90°) to

Reflective symmetry means a type of symmetry where on half is the reflection of the other half. The image could be folded down the middle and the 2 sides would match perfectly

Line of symmetry means the line you would fold down so that the 2 sides would match exactly

Translation means moving a shape without rotating, resizing or flipping it. The shape should look exactly the shape just in a different position on a grid. (Sliding)

Origin means the starting point. It is 0 on a number line and (0,0) on a co-ordinates grid

Year 6

Numerator means the number on the top of a fraction

Denominator means the number on the bottom of a fraction

Factor means an integer that will divide exactly into another number without any remainders. For example 3 is a factor of 12

Securing Number Facts, Relationships and Calculating

Calculate means work it out

Number sentence means a simple equation using numbers and symbols e.g. 3 + 4 = 7

Sum means add

Total means add

Altogether means add

Difference means take away

Fraction means part of a whole

Year 2

Inverse means the opposite. For example x is the inverse operation to ÷

Operation means + - x or ÷

Multiple of means in the times table of. For example 20 is a multiple of 5 as it is in the 5 x table

Remainder means the number that is left over if a number does not divide exactly by another

Year 3

Product means multiply for example the product of 6 and 2 is 12

Unit fraction means a fraction where the numerator (top number) is 1 e.g. ½ or ¼

Year 4

Factor means an integer that will divide exactly into another number without any remainders. For example 3 is a factor of 12

Quotient means the answer once you have divided one number by another
For example: dividend ÷ divisor = quotient   12 ÷ 3 = 4   4 = quotient

Numerator means the number on the top of a fraction

Denominator means the number on the bottom of a fraction

Mixed Number or Mixed Fraction means a whole number and a fraction combined e.g. $2\frac{1}{2}$

Year 5

Proper fraction means any fraction where the numerator (top number) is less than the denominator (bottom number) e.g. $\frac{1}{4}$ or 5/6 or 20/100

Improper fraction means any fraction where the numerator (top number) is greater than the denominator (bottom number) e.g. 6/4 or 9/6 or 100/24

Percentage means out of 100. So 25% means 25 out of 100

Equivalent means the same size as e.g. 2 x 6 is equivalent to 13-1. 2/4 is equivalent to $\frac{1}{2}$

Year 6

Common denominator means that 2 or more fractions will have the same denominator. E.g. $\frac{3}{4}$ and 7/8. If I multiply $\frac{3}{4}$ by 2 then I will get 6/8. Now both fractions have a common denominator.

Ratio means the relative sizes of 2 or more values. For example in a class there are 6 boys and 4 girls so there is a ratio 6:4 (boys:girls) or simplified this is 3:2.