Mathematical Vocabulary

Year 6



**Mathematics vocabulary list Year 6**

Maths is its own language. Sometimes that language looks like written word and sometimes it looks like symbols, but it is a language; it must be learned for math fluency and competency. If your child does not have a good understanding of key mathematical vocabulary, it can hinder them in making good progress in maths and in other areas of the curriculum.

At Chester Blue Coat, we explicitly teach maths vocabulary, giving it a context and allowing children to apply it in a variety of problems.

Listed below are the key mathematical terms your child will learn this year. This is the minimum we expect children to learn; however, we know children are curious and will undoubtedly want to learn more and we encourage this.

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| **Vocabulary** | **Definition** | | **Example** |
| **Number and Place Value** | | | |
| Brackets | The symbols ( ) used to separate parts of a multi-step calculation. | | *‘(10 – 2) × 3 = 24’* |
| Degree of accuracy | A description of how accurately a value is communicated. | | *‘The* ***degree of accuracy*** *needed for the answer is one decimal place.’* |
| Equivalent expression | An expression, which can be algebraic, which is equal in value to another expression. | | *‘Find an* ***equivalent expression*** *to 17 + 10. 18 + 9 is an* ***equivalent expression*** *to 17 + 10. ‘* |
| Order of operations | The internationally agreed  order to complete operations  in a multi-step equation with  multiple operations. | | *‘(3 + 4) × 2 =*  *The* ***order of operations*** *dictates that the operation within the brackets is completed first.’* |
| **Addition and subtraction** | | | |
|  |  | |  |
| **Multiplication and division** | | | |
| Factorise | To identify factors of a given number. To express a number as factors. | | *‘I can* ***factorise*** *12 by looking at its factor pairs. 1 × 12 = 12, 2 × 6 = 12, 3 × 4 = 12. So the factors of 12 are 1, 2, 3, 4, 6 and 12.’* |
| Prime factor | A factor that is a prime number.  In other words: any of the prime numbers that can be multiplied to give the original number | | *‘The* ***prime factors*** *of 15 are 3 and 5 (because 3×5=15, and 3 and 5 are prime numbers)’.* |
| factor | A factor that is a prime number. | | *‘3 and 2 are* ***prime factors*** *of 6.‘* |
| Prime number | A whole number with only two factors, one and the number itself. | | *‘2, 3, 5, 7, 11, 13, 17 and 19 are the*  ***prime numbers*** *less than 20.’* |
| Square number | The product of two equal factors. | | *‘9 is a* ***square number*** *because 9 = 3 × 3.‘* |
| **Fractions, Decimals and Percentages** | | | |
| Ratio | A ratio shows the relative sizes of two or more values. | |  |
| Proportion | A comparison between two or more parts of a whole or group. Proportion expresses a part-whole relationship. This may be represented as a fraction, a percentage or a decimal. | | *‘Two thirds of a group of children were boys. The* ***proportion*** *of the group that is girls is one third.’* |
| **Algebra** | | | |
| Equation | An equation says that two things are equal.  It will have an equals "=" sign | | *‘That* ***equation*** *says: what is on the left (7 + 2) is equal to what is on the right (10 − 1)’*  *7 + 2 = 10 - 1* |
| Formula | An algebraic expression of a  rule. | | *‘The area of a rectangle can be found by multiplying the width and height. a = w × h. This is the* ***formula****’.* |
| Unknown | A number we do not know. | | *‘In the equation below, y is* ***unknown*** *but can be calculated.*  *y + 17 = 100’* |
| Variable | A symbol for a value we don't know yet. It is usually a letter like x or y. | |  |
|  |  | |  |
| **Length** | | | |
| Feet/foot | An imperial unit of measure of length. | | *‘I am approximately five* ***feet*** *tall.’* |
| Mile | An imperial unit of measure of length. | | *‘Five* ***miles*** *is equivalent to eight kilometres.’* |
| Yard | A unit of length (or distance) equal to 3 feet or 36 inches. | | *‘In football, the penalty spot in 12* ***yards*** *from the goal line.’* |
| **Weight** | | | |
| Ounce | An imperial unit of measure of mass. | | *‘The new born baby had a mass of 6 pounds and 3* ***ounces****’.* |
| Tonne | A unit of mass equal to 1000 kilograms. | | *‘A small car weighs about 1* ***tonne****’.* |
| **Capacity and Volume** | | | |
| Centilitre | A metric unit of capacity, equal to one hundredth of a litre | | *‘There are 500* ***centilitres*** *in this beaker. It is about the same 5 litres’.* |
| Gallon | An imperial unit of measure of volume/capacity. | | *‘A* ***gallon*** *is approximately 4.5 litres.’* |
| **Temperature** | | | |
| **Time** | | | |
| British Summer Time | Time as advanced one hour ahead of Greenwich Mean Time for daylight saving in the UK between March and October. | | *‘During* ***British Summer Time****, there are more daylight in the evening and less in the morning’.* |
| Greenwich Mean Time | Greenwich Mean Time is an internationally standard time format. It is the main time zone in several countries, including the United Kingdom. | |  |
| **Money** | | | |
| Loss | If the income is less than the expenses. | | *‘Two days ago. Sam's Bakery received $480, but expenses were $520.*  *$480 − $520 = −$40, which is a $40* ***loss****’.* |
| Profit | Income minus all expenses. | | *‘Sam's Bakery received $900 yesterday, but expenses such as wages, food and electricity came to $650. So the* ***profit*** *was $900 − $650 = $250.’* |
| **2D Shape** | | | |
| Arc | A portion of the circumference of a circle | |  |
| Circumference | The perimeter/boundary of a circle. | |  |
| Compass | A tool for creating curved lines, arcs and circles. | | *‘I can use a pair of* ***compasses*** *to draw a circle with a radius of 4 cm. ‘* |
| Intersect | The point at which two (or more) lines meet is where they intersect. | | *‘The x and y axes* ***intersect*** *at (0,0) ‘* |
| Diameter | A line from one point of the circumference of a circle to another on the opposite side, which must pass through the centre of the circle. | |  |
| Radius | A line from one point of the circumference of a circle to the centre of the circle. | |  |
| Similar | Similar shapes are those which have the same internal angles and where the side lengths are in the same ratio or proportion. Enlarging a shape by a scale factor (for example by doubling all side lengths) creates a similar  shape. | | *‘All squares are* ***similar*** *to one another.’* |
| **3D Shape** | | | |
| Dodecahedron | | A polyhedron (a flat-sided solid object) with 12 Faces. |  |
| Net | | A group of 2-D shapes which, when folded and connected,  forms a 3-D polyhedron. | *‘The* ***net*** *of a cube is comprised of six connected squares. ‘* |
| **Position and direction** | | | |
| Origin | | The point at which axes in a coordinates grid cross; the point (0,0). |  |
| Line graph | | A graph with points connected by lines to show how something changes in value:  • as time goes by,  • or as something else changes. |  |
| Vertically opposite angles | | Angles which are positioned  opposite to one another when  two lines intersect. |  |
| **Statistics** | | | |
| Mean | | The Arithmetic Mean is the average of the numbers: a calculated "central" value of a set of numbers.  To calculate it:  • add up all the numbers,  • then divide by how many numbers there are. | *‘What is the* ***mean*** *of 2, 7 and 9?*  *Add the numbers: 2 + 7 + 9 = 18*  *Divide by how many numbers (i.e. we added 3 numbers): 18 ÷ 3 = 6*  *So the* ***mean*** *is 6’.* |
| Pie chart | | A representation of a set of data where each segment represents one group in proportion to the whole. |  |
| Statistics | | The study of data: how to collect, analyse, summarise and present it. |  |