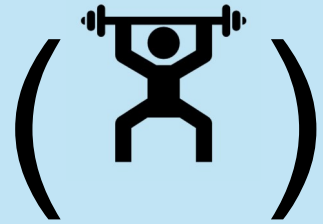
ALGEBRA: KEY VOCABULARY

Key Word	What does it mean?	Example	Make it real
Variable	A letter used to represent a number we don't know yet.	x, y or z	 **Don't know?** If you're writing an essay and you don't know something, you might leave it blank or write a question mark. In algebra, instead of writing a question mark, or leaving a blank space, you use a letter.
Constant	A number that does not change.	$x + 3$	 **Pizza delivery**. When you order a pizza, you pay a delivery charge. This is the same charge no matter how many pizzas your order or where you live. It is a constant.
Coefficient	A number that multiplies a variable.	$7x$	 **How much will I get paid?** If you have a part-time job, you get paid per hour. Let's say you get paid £7 per hour. You

			can work out how much you get paid each week by multiplying the number of hours you work by 7. $7x$. Where 7 is the coefficient and x is the number of hours worked.
Expression	A combination of variables, constants and operators (like +, -, x and ÷).	$7x + 10$	 **How much will I get paid?** If you work in a café you may share tips. Let's say one week you get £10 in tips. Your pay that week will be 7 (your hourly rate) multiplied by the number of hours your worked, plus tips.
Equation	A mathematical sentence that shows two expressions are equal.	$2x + 3 = 7$	 An equal sign tells you that what is on one side of the equation balances what is on the other side.
Term	Part of an expression or equation. Can be a number, a variable, or both multiplied together.	$7x + 10$	 **How much will I get paid?** Let's go back to your wages. 7x, your hourly rate multiplied by how many hours you get paid, is a term. So is 10, the tips you earn.

Like term	Terms that have the same variable(s) raised to the same power.	$3x$ and $7x$ $6x^2$ and $2x^2$	  If you go shopping and buy 1 apple in the first shop and two apples in the second shop, you can combine them and say you bought three apples because they are the same thing.
Unlike term	Terms that have different variables or different powers of the same variable.	$3x$ and $5y$ $4x$ and $2x^2$	 If you go shopping and buy 1 apple and 1 pineapple, you can't combine them and say you bought two apples because they aren't the same thing.
Simplify	To combine like terms and make an expression as simple as possible.	$2x + 3x$ $= 5x$	 An abridged novel is a shorter version of the original story. It may be more concise or easier to understand.
Solve	To find the value of a variable that makes an expression true.	If, $x + 2 = 5$ Then, $x = 3$	 You want to buy concert tickets that cost £60. You

			already have £20, and you plan to save £10 per week. How many weeks will it take to afford the ticket?
Substitution	To replace a variable with a known value in an equation or expression.	If, $x = 3$ Then, $2x + 5 =$ $(2 \times 3) + 5$ $= 11$	 You are planning a film night. Tickets for a movie cost £12 each, and snacks cost £5 each. You plan to buy tickets for 2 friends and yourself, plus 3 snacks. The total cost is given by the equation: C = 12t + 5s
Formula	A rule that shows the relationship between different variables in a particular context.	Area of a rectangle = length x width	 Members of a family are related to each other. A formula is like a family. It tells you how variables are related to each other.
Change the subject	To rearrange a formula so that a different variable is on one side of the equation by itself.	Length of a rectangle = $\frac{Area}{Width}$	  Imagine you rearrange your

			room. Now the window is the focus of the room.
Expand	To simplify an expression by removing brackets and multiplying them out.	$3(x + 4)$ = *(3 x x)* + *(3 x 4)* = $3x + 12$	
Factorise	To put an expression back into brackets by identifying common factors.	$6x + 12 =$ $6(x + 2)$