Year 9 Foundation – Unit 1 KO – Integers and Place Value, Decimals, Indices, Powers and Roots, Factors, Multiplies and Primes

Integers			
1	Integer	A positive or negative whole number.	
2	Decimal	A number that uses a decimal point followed by digits that show a number less than a whole.	
3	Addition	Finding the total, or sum, by combining two or more numbers.	
4	Sum	The result of adding two or more numbers.	
5	Subtraction	Taking one number away from another.	
6	Difference	The result of subtracting one number from another.	
7	Division	The result of sharing fairly.	Dividend ÷ divisor = quotient.
8	Quotient	The answer after we divide one number by another.	
9	Dividend	The number you are dividing.	
10	Divisor	The number you are dividing by.	
11	Remainder	The amount left over after you have divided two numbers.	
12	Multiplication	Times numbers together.	
13	Product	Multiply.	
14	Operation	A mathematical process. E.g., $(+, -, \times, \div)$	

Place Value			
1	Order	Putting things into their correct place following a rule.	
2	$x <$	x is less than	
3	$x \leq$	x is less than or equal to	
4	$x >$	x is greater than	
5	$x \geq$	x is greater than or equal to	
6	$x \neq$	x does not equal	
7	Positive number	A number greater than zero.	
8	Negative number	A number less than zero.	
9	BIDMAS	The order in which you solve a calculation.	B -Brackets I –Indices D –Division M –Multiplication A –Addition S –Subtraction

10	Powers of 10		10 multiplied by itself				
	10^0	10^1	10^2	10^3	10^4	10^5	10^6
	1	10	100	1,000	10,000	100,000	1,000,000

Decimals												
1	Place value	The value of a digit in a number.										
2	Million	Hundred thousand	Ten thousand	Thousand	Hundred	Ten	Unit	.	Tenth	Hundredth	Thousandth	Ten-thousandth
3	Decimal place	The position of a digit to the right of a decimal point.										
4	First significant figure	The first non-zero digit in a number.										
5	Rounding	To make a number simpler but keep its value close to what it was.										
6	Estimate	To make an educated guess of the value of a calculation by rounding each number to one significant figure.										
7	Ascending order	Arrange numbers from smallest to largest.										
8	Descending order	Arrange numbers from largest to smallest.										

Indices Powers and Roots			
1	Square Number	The result of multiplying a number by itself. It will always be positive.	1, 4, 9, 16, 25, 36, 49, 64, 81, 100
2	Square Root	The opposite of squaring a number to find the original factor.	$\sqrt{}$
3	Cube Number	The result of multiplying a number by itself, then by itself again.	1, 8, 27, 64, 125, 216, 343, 512, 729, 1000
4	Cube Root	The opposite of cubing a number to find the original factor.	$\sqrt[3]{}$

5	Index Number/ Indices/ Power	A figure that represents the number of times a number is multiplied by itself.	
6	Index Notation	Represents repeated multiplications of the same number.	
7	Index Laws	Anything to the power of zero is 1.	$a^0 = 1$
		Anything to the power of 1 is itself.	$a^1 = a$
		Power multiplied by a power – add the indices.	$a^m \times a^n = a^{m+n}$
		Power divided by a power – subtract the indices.	$a^m \div a^n = a^{m-n}$
		Power to a power - multiply the indices.	$(a^m)^n = a^{m \times n}$
Factors, Multiples and Primes			
1	Odd Number	A number that cannot be divided by two to give a whole number answer.	
2	Even Number	A number divisible by two.	
3	Factor	A number that divides into another number without leaving a remainder.	
4	Multiple	The result of multiplying a number by another number.	
5	Prime	A whole number that only has two factors, 1 and itself.	2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97
6	Decomposition	To break something down into smaller parts.	
7	Venn Diagram	A diagram that identifies common elements of two or more things.	
8	Lowest Common Multiple (LCM)	The smallest positive number that is a multiple of two or more numbers.	
9	Highest Common Factor (HCF)	The greatest number that is a factor of two or more other numbers.	
10	Prime Factorisation	Finding prime numbers that multiply to give the original number.	