Yr7: ASK Yourself!

Subject: Maths
Unit: Whole Year

	Launching	Developing	Progressing	Mastering
Skills				
	I need to be able to use the skills of TENSILE in maths.	I use TENSILE skills sometimes in maths.	I can use each of the TENSILE skills confidently.	I can expertly use TENSILE and see how each skill helps me learn.
Knowledge				
Principles of number	I understand and can use place value to multiply and divide by powers of 10.	I can add and subtract integers using a formal method.	I can use long multiplication and division with any integers.	I can solve problems using any of the 4 rules, including negative numbers.
Order of Operations	I can confidently multiply to numbers together up to 10 x 10.	I can confidently work out the answer to questions involving two operations such as 3 + 4 x 2 = 11.	I can confidently work out the answer to questions which have brackets and indices involved.	I can solve problems involving BIDMAS such as placing brackets in the correct place to make an answer correct.
Fractions, Decimals and Percentages	I can recognise and name fractions such as $\frac{1}{4}$, $\frac{1}{2}$ and 1/3.	I confidently change fractions such as $\frac{1}{2}$ and $\frac{1}{4}$ into a decimal or a percentage.	I confidently convert a simple percentage into a fraction or a decimal.	I confidently convert between any fraction, decimal or percentage.
Angles	I can confidently describe turns such as a quarter turn or a half turn.	I can confidently describe angles as acute or obtuse and estimate angles.	I can confidently find angles on a straight line or around a point.	I can confidently find angles on parallel lines using the corresponding and alternate rules.
Measures	I can change between 12 and 24 hr clock times	I can work out the interval between 2 times and also read from scales.	I can calculate and change between metric units of length and mass.	I can calculate and change between metric and imperial units.
Representing data	I can use and tally chart to collect information.	I can group data into a frequency tally chart and a frequency table.	I can create and use tally charts for discrete and continuous data.	I can put the data into grouped frequency tables and draw grouped frequency diagrams.

Coordinates	I can plot and find coordinates in the first quadrant.	I can plot and find coordinates in all 4 quadrants.	I can use properties of 2D shapes to find missing coordinates.	I can plot and find coordinates in 3D and also find the midpoint of a line segment.
Properties of shapes	I can explain the properties of triangles including equal lengths and angles.	I can explain properties of quadrilaterals, circles and other 2D shapes.	I can identify and describe why shapes are congruent.	Use the properties of faces, surfaces, edges and vertices of cubes, cuboids, prisms to solve problems in 3D.
Introducing Probability	I can confidently use the language of probability such as likely or even chance.	I can confidently use a number line from 0 to 1 to place events in order of likeliness.	I can confidently use fractions to describe the likeliness of events happening such as a 6 on a dice.	I can confidently find the probability of two events using a two way table.
Ratio and proportion	I confidently divide amounts into equal groups.	I confidently simplify a ratio.	I confidently write a ratio in the form 1:n.	I confidently divide a quantity in a ratio and solve problems involving ratio.
Introducing Algebra	I understand that 4+4+4+4+4 is the same as 4 x 5.	I can simplify expressions by collecting like terms.	I can expand single brackets and collect like terms.	I can factorise into one bracket and also substitute values into a formula.
Data sets	I can Systematically group data into sets e.g. square, primes, evens, odd.	I can organise data into tables and grids including two way tables.	I can organise data into Venn diagrams.	I can calculate simple probabilities from the resulting diagrams.
Factors and Multiples	I confidently recognise numbers that are in the 2, 5 and 10 timetables.	I confidently find the factors or multiples of a number less than 30.	I confidently find the highest Common Factor of a set of numbers.	I confidently find the Lowest Common Multiple of any two numbers.
Sequences	I can use a function machine with an input to find an output.	I can find missing terms in number patterns and explain the rules used.	I can use the nth term of a sequence to find the first 5 terms of a sequence.	I can find the nth term of a linear sequence.
Significant figures	I can use place value to determine the value of a digit in a number.	I can round numbers to the nearest whole, ten or hundred.	I can round numbers to any given significant figure.	I can round solutions to problems to an appropriate significant figure.
Using a calculator	I can use BIDMAS with whole positive numbers.	I can use BIDMAS with negative numbers and work with negative numbers in a calculator.	I can use the fractions and brackets functions on a calculator.	I can use the powers and roots buttons on a calculator.

Perimeters	I can find the perimeter of basic shapes including rectangles, triangle and parallelograms.	I can find the perimeter of basic shapes where unit conversion is required e.g. some lengths in mm and some in cm.	I can find the perimeter of a compound shape.	I can solve problems using perimeter of shapes in context.
Area	I can recognise 2D shapes. I can use squares to find an area.	I can find the area of rectangles and triangles.	I can find the area of a parallelogram and trapezium.	I can solve area problems in context and use algebra.
Plans and elevations	I can draw a plan and side elevation of a given 3D solid.	I can draw a 3D solid given its plan and side elevations.	I can draw a 3D solid given its net.	I can find the surface area of any prism.
Scale diagrams	I can convert measurements from a map to real life using a given scale factor.	I can convert a measurement from real life to a map using a given scale factor.	I can create a scale drawing from a real life context e.g. scale drawing of your bedroom.	I understand and use map scales to solve problems in context.