YEAR 6 – NON-NEGOTIABLE EXPECTATIONS: MATHS – 2016/17

	NUMBERS AND PLACE VALUE					
1	I can read, write, order and compare numbers up to 10 000 000 and determine the value of each digit					
2	I can use negative numbers in context, and calculate intervals across zero					
3	I can round any number to a required degree of accuracy					
4	I can solve number and practical problems that involve all of the above – comparing numbers, negative numbers and rounding					
5	I can identify common factors, common multiples and prime numbers					
6	I can identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places					
	NUMBER CALCULATIONS – MULTIPLICATION, DIVISION, ADDITION & SUBTRACTION					
7	I can solve problems involving the relative sizes of two quantities where the missing values can be found by using integer multiplication and division facts					
8	I can multiply 1-digit numbers with up to two decimal places by whole numbers					
9	I can perform mental calculations, including with mixed operations and large numbers as well as manipulating expressions using commutative and distributive properties					
10	I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication					
11	I can divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division and short division, and interpret remainders as whole number remainders, fractions, by rounding or has up to two decimal places, as appropriate for the context					
12	I can use knowledge of order of operations to carry out calculations involving all four operations					
13	I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why including formal written methods					
14	I can solve problems involving addition, subtraction, multiplication and division					
15	I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy					
	FRACTIONS					
16	I can use common factors to simplify fractions; use common multiples to express fractions in the same denomination					
17	I can compare and order fractions, including fractions > 1					
18	I can add fractions with different denominations and mixed numbers, using the concept of equivalent fractions					
19	I can subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions					
20	I can multiply simple pairs of proper fractions, writing the answer in its simplest form					
21	I can divide proper fractions by whole numbers (1/8 divided by 2 = 1/16)					
22	I can associate a fraction with division and calculate decimal fraction equivalents (for example 0.375 or 3/8)					
23	I can I can solve problems involving the calculation of percentages, such as 20% of 440 and the use of percentages for comparisons					

24	I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts					
	RATIO & PROPORTION					
25	I can solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts					
26	I can solve problems involving similar shapes where the scale factor is known or can be found					
27	I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples					
	ALGEBRA					
28	I can use simple formula and substitute values to solve problems eg perimeter of a rectangle or area of a triangle					
29	I can generate and describe linear number sequences					
30	I can express missing number problems algebraically					
31	I can find pairs of numbers that satisfy number sentences involving two unknowns					
32	I can enumerate possibilities of combinations of two variables					
	MEASUREMENT					
33	I can use, read, write, convert and solve problems between standard units of: • Length From smaller unit of measure to larger and visa versa using decimal notation up to 3 decimals					
34	I can use, read, write, convert and solve problems between standard units of: • Mass From smaller unit of measure to larger and visa versa using decimal notation up to 3 decimals					
35	I can use, read, write, convert and solve problems between standard units of: • Volume From smaller unit of measure to larger and visa versa using decimal notation up to 3 decimals					
36	I can use, read, write, convert and solve problems between standard units of: • Time From smaller unit of measure to larger and visa versa using decimal notation up to 3 decimals					
37	I can convert between miles and kilometres					
	GEOMETRY – PROPERTIES OF SHAPE					
38	I can recognise, describe and build simple 3D shapes including making nets					
39	I can draw 2-D shapes using given dimensions and angles					
40	I can compare and classify geometric shapes based on their properties and sizes					
41	I can find unknown angles, using mathematical reasoning, in any triangle, quadrilateral and regular polygons					
42	I can illustrate and name parts of circles, including radius, diameter and circumference and know that the radius is half the diameter					
43	I can calculate the area of a parallelogram and triangles					
44	I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.					
45	I can calculate, estimate and compare volume of cubes and cuboids using standard units					

46	I can describe positions on the full coordinate grid (all four quadrants)					
47	I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes					
	STATISTICS					
48	I can interpret and construct pie charts and use these to solve problems					
49	I can interpret and construct line graphs and use these to solve problems					
50	I can calculate and interpret the mean as an average					