Year 5 Mathematics – End of Year Expectations

Place value	• The pupil can read, write, order, round and compare numbers to at least 1,000,000 and determine the value of each digit. *(E.g. what is the value of the digit 5 in the number 654 321)* • The pupil can interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. *(E.g. what is 4 more than -6, what is the next number in this sequence? 12, 7, 2, _, _?)* • Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. (E.g. what is 10 less than 9000?)
Addition and subtraction	• The pupil can solve multi step addition and subtraction problems with more than 4 digits/decimals to three places, including using formal written methods (where appropriate) *(e.g. 77 912cm + 2 329cm = __ , __ + 1242 = 12105 , 54.345 + 25.456 = 40 + ___)* • The pupil can use estimation and inverse to check answers *(e.g. estimate 4512 + 1221 = ____ as 4500 + 1200 = 5700, and check 6751 – 2134 = 4617 by completing the addition calculation 4617 + 2134 = 6751)*
Multiplication and division	• The pupil can instantly recall the multiplication and division facts for up to 12x12 to find all factor pairs of a number, and common factors of two *numbers (E.g. What are the common factors of 24 and 40, how many factors has 25 got? _ x 7 = 84, 108 ÷ __ = 9)* • The pupil can solve problems involving multiplying numbers up to 4 digits by a one- or two-digit number using a formal written method (and make the choice when to use formal written method) (*E.g. 2462 x 63, 2462 x 10)* • The pupil can solve problems involving dividing numbers up to 4 digits by a one-digit number using a formal written method (and make the choice when to use formal written method) (*E.g. 2464 ÷ 8, 2464 ÷ 10)*
Fractions, decimals and percentages	• The pupil can use equivalent fractions in order to compare, add, subtract and order fractions whose denominators are all multiples of the same number *(E.g. 2/7 + 5/14 = 1/14 + __ , 3/8 of 24 is greater or less than 2/4, John has 2/5 of a bar and Amy 3/10. Who has the most? Why?)* • The pupil can recognise mixed numbers and improper fractions and convert from one form to the other (*E.g 2 ¼ = 9/4)* • The pupil can multiply proper fractions and mixed numbers by whole numbers, supported by materials and *diagrams (I have 6 quarters of an apple – how much have I got altogether as a mixed number?)* • The pupil can read, write, order and compare decimal numbers. Convert decimals to fractions *(E.g 0.71 = 71/100, 0.007 = 7/1000)* • The pupil can write percentages as a fraction with denominator 100, and solve problems which require knowing percentage and decimal equivalents of ½,1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25. *(E.g. 2/5 is ___% and 0.__)*
Measurement	• The pupil can solve problems and convert between different units of metric measure/units of time *(E.g. 3 hours = 180 minutes, 6780 meters = 6km 780 meters)* • The pupil can calculate the perimeter and area of composite rectilinear shapes in centimetres and metres
Shape	• The pupil can identify 3-D shapes, including cubes and other cuboids, from 2-D representations • The pupils can estimate, measure and draw given angle
Position and Direction	• The pupil can identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed
Statistics	• The pupil can solve comparison, sum and difference problems using information presented in a line graph and complete, read and interpret information in tables, including timetables *(line graphs, bar charts)*