National Curriculum for Mathematics - Objectives - Year 6

	Number					Measurement			
POS	Number and place	Addition, subtraction, multiplication and division	Fractions (including decimals and percentages)	Ratio and Proportion	Algebra	Measurement	Properties of shapes	Position and direction	Statistics
LO	-read, write, order and compare numbers up to 10 000 000 and determine the value of each digit. -round any whole number to a required degree of accuracy. -use negative numbers in context, and calculate intervals across zero. -solve number problems and practical problems that involve all of the above.	-multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. -divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. -divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. -perform mental calculations, including with mixed operations and large numbers. -identify common factors, common multiples and prime numbers. -use their knowledge of the order of operations to carry out calculations involving the four operations. -solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. -solve problems involving addition, subtraction, multiplication and division. .-use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	-use common factors to simplify fractions; use common multiples to express fractions in the same denomination. -compare and order fractions, including fractions >1. -add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. -multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. 1/4 × 1/2 = 1/8). -divide proper fractions by whole numbers (e.g. 1/3 ÷ 2 = 1/6). -associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8). -identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places. -multiply one-digit numbers with up to two decimal places by whole numbers. - use written division methods in cases where the answer has up to two decimal places. -solve problems which require answers to be rounded to specified degrees of accuracy. -recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	-solve problems involving the relative sizes of two quantities where missing values can be found be using integer multiplication and division facts. -solve problems involving the calculation of percentages (for example, of measures, and such as 15% of 360) and the use of percentage for comparison. -solve problems involving similar shapes where the scale factor is known or can be found. -solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	-use simple formulae -generate and describe linear number sequences. -express missing number problems algebraically. -find pairs of numbers that satisfy an equation with two unknowns. -enumerate possibilities of combinations of two variables.	-solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate. -use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places. -convert between miles and kilometres. -recognise that shapes with the same areas can have different perimeters and vice versa. -recognise when it is possible to use the formulae for area and volume of shapes. -calculate the area of parallelograms and triangles. -calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3) and extending to other units, such as mm^3 and km^3.	-draw 2-D shapes using given dimensions and angles. -recognise, describe and build simple 3-D shapes, including making nets. -compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. - illustrate and name parts of circles, including radius, diameter and circumference. -recognise angles where they meet at a point, are on a straight line, or are vertically opposite and find missing angles.	-describe positions on the full coordinate grid (all four quadrants). -draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	-interpret and construct pie charts and line graphs and use these to solve problems. -calculate and interpret the mean as an average.

Autumn Term 1 Autumn Term 2 Spring Term 1 Spring Term 2 Summer Term 1 Summer Term 2