Year Group Mathematics Objectives - Jane Prelogauskas St Andrew's CE Primary School – August 2014

YEAR FIVE	NUMBER & NUMBER FACTS/CALCULATIONS/PLACE VALUE/COUNTING	GEOMETRY/MEASURES MONEY	STATISTICS (Data Handling)	FRACTIONS DECIMALS PERCENTAGES AND RATIO	ALGEBRA
Working towards	~Count forwards and backwards in steps of powers of 10 for any given number up to 1,000,000. ~ Read, write, order and compare numbers up to 1,000,000 and determine the value of each digit. ~ Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. ~ Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. ~ Know and use the vocabulary of prime numbers and composite (non-prime numbers) ~ Recall prime numbers up to 19 ~ add and subtract numbers mentally with increasingly large numbers. ~ Multiply and divide numbers mentally drawing upon known facts. ~ Add and subtract whole numbers with more than 4 digits, including using formal written methods. ~ Multiply numbers up to 3 digits by one digit using a formal written layout. ~ Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the = sign. ~ Solve problems involving multiplication and division including scaling by simple fractions and problems involving simple rates.	~ Distinguish between regular and irregular polygons, based on a reasoning about equal sides and angles. ~ Know angles are measured in degrees, estimate and compare acute, obtuse and flex angles. ~ Identify angles at a point and one whole turn (360 degrees). ~Estimate volume and capacity. ~ Measure and calculate the perimeter of rectangles in cms and metres. ~ Use all four operations to solve problems involving measure (eg. length, mass, volume, money), using decimal notation, including scaling. ~ 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. .	~ Complete, read and interpret information in tables, including timetables	~ Compare and order fractions, whose denominators are all multiples of the same number. ~ Add and subtract fractions with the same denominator and denominators that are multiples of the same number. ~ read and write decimal numbers as fractions (eg. 0.71 = 71/100) ~ Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. ~ Recognise the percent symbol (%) and understand that percent relates to number and parts per 100.	
Mainly Achieved	~ Interpret negative numbers in context, counting forwards with positive whole numbers, including through zero. ~Round any number to the 1,000,000 to the nearest 10, 100,1000,10 000 and 100 000 ~ Recognise and use square numbers and the notation for squared. ~ establish whether a number up to 100 is prime. ~ Know and use the vocabulary of prime factors. ~ Multiply and divide whole numbers and those involving decimals, by 10, 100 and 1000. ~ Multiply numbers by 4 digits, by a 1 or 2 digit number, using a formal written method, including long multiplication for 2 digit numbers eg, TUxTU ~ Divide numbers up to 3 digits by one digit using a formal written layout,	~ Identify 3d shapes including cubes and other cuboids, from 2D representation. ~ Draw given angles, and measure them in degrees. ~ identify angles at a point on a straight line and half a turn (total 180 degrees). ~ Convert between different units of metric measure. ~ Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. ~ Calculate and compare the area of rectangles (including squares), and including using standard units,	~ Solve comparison, sum and difference problems, using information presented in a line graph	~ Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. ~ Recognise mixed number fractions and improper fractions and convert from one for the other. ~ Write mathematical statements >1 as a mixed number, (eg. 2/5 + 4/5 = 6/5 = 1 1/5) ~ Solve problms which require knowing percentage and decimal equivalents of half, quarter, fifth, two fifths and four fifths and those fractions with a	

	~ Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. ~ Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes.	square cms and square ms, and estimate the area of irregular shapes. ~ Solve problems involving converting between units of time and money.		denominator of a multiple of 10 or 25. ~ Round decimals with two decimal places to the nearest whole number and to one decimal place. ~ read, write, order and compare numbers with up to three decimal places. ~ Write percentages of a fraction with denominator 100 and as a decimal.	
Achieved	~ Interpret negative numbers in context, count backwards with negative whole numbers, including through zero. ~ Recognise and use cube numbers, and the notation for cubed. ~ Divide numbers up to 4 digits, by a one digit number, using the formal written method of short division. ~When dividing, interpret remainders approximately for the context. ~ Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why.	~ State and use the properties of rectangles including squares), to decide related facts and find missing lengths and angles. ~ Identify other multiples of 90 degrees. ~ Understand and use appropriate equivalences between metric units and common imperial units such as inches, pounds, and pints.		~ Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. ~ Solve problems involving numbers with up to three decimal places.	