

Year 5 - Autumn Term Numeracy objectives

Number Number and place value	Number Addition and subtraction	Number Multiplication and division	Number Fractions
<ul style="list-style-type: none"> - Read, write, order and compare numbers to at least 1, 000, 000 and determine the value for each digit - Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 - Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero - Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000, and 100,000 - Solve number problems and practical problems that involve all of the above - Read Roman numerals up to 1000 (M) and recognise years written in Roman numerals 	<ul style="list-style-type: none"> - Add and subtract numbers with more than 4-digits, including using formal written methods (columnar + and -) - Add and subtract mentally with increasingly large numbers - Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy - Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why 	<ul style="list-style-type: none"> - 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, prime factors and composite (non-prime numbers) - Establish whether a number up to 100 is prime and recall prime numbers up to 19 - Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for two-digit numbers - Multiply and divide numbers mentally drawing upon known facts - Multiply and divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders - Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 - Recognise and use square numbers and cube numbers, and the notation for the squared and cubed - Solve problems involving \times and \div including their knowledge of factors and multiples, squares and cubes - Solve problems involving + and -, \times and \div and a combination of these, including understanding the meaning of the equal sign - Solve problems involving \times and \div, including scaling by simple fractions and problems involving simple rates 	<ul style="list-style-type: none"> - Compare and order fractions whose denominators are multiples of the same number - Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths - Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number - + and - fractions with the same denominator and denominators that are multiples of the same number - \times proper fractions and mixed numbers by whole numbers, supported by materials and diagrams - Read and write decimal numbers as fractions - Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents - Round decimals with two decimal places to the nearest whole number and to one decimal place - Read, write, order and compare numbers up to three decimal places - Solve problems involving number up to three decimal places - Recognise the cent symbol and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100 and as a decimal - Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25

Measurement	Geometry	Statistics
<ul style="list-style-type: none"> - Convert between different units of metric measure - Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints - Measure and calculate the perimeter of composite rectilinear shapes in cm and m - Calculate and compare the area of rectangles, and including using standard units, cm², and m², and estimate the area of irregular shapes - Estimate volume and capacity - Solve problems involving converting between units of time - Use all four operations to solve problems involving measure 	<ul style="list-style-type: none"> - Identify 3-D shapes, including cubes and other cuboids, from 2-D representations - Know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles - Identify: angles at a point and one whole turn, angles at a point on a straight line and $\frac{1}{2}$ a turn, other multiples of 90 degrees - Use the properties of rectangles to deduce related facts and find missing lengths and angles - Distinguish between regular and irregular polygons based on reasoning about equal sides and angles 	<ul style="list-style-type: none"> - Solve comparison, sum and difference problems using information presented in a line graph - Complete, read and interpret information in tables, including timetables