



Mount Pleasant Primary School

Maths Medium-Term Plan: Year 5



		Number	Measurement	Geometry	Statistics	
Autumn	Unit	Place Value (3 weeks)	Addition & Subtraction (2 weeks)	Statistics (2 weeks)	Multiplication & Division (3 weeks)	Perimeter & Area (2 weeks)
	NC Objectives	Read, write, order and compare numbers to at least 1,000,000 and determine the value of 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 1,000 (M) and recognise years written in Roman numerals	Add and subtract numbers mentally with increasingly large numbers Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) 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 contexts, deciding which operations and methods to use and why	Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables including timetables	Multiply and divide numbers mentally drawing upon known facts Multiply and divide whole numbers by 10, 100 and 1000 Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3) Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes 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	Measure and calculate the perimeter of composite rectilinear shapes in cm and m Calculate and compare the area of rectangles (including squares), and including using standard units, cm ² , m ² Estimate the area of irregular shapes Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)
	Small Steps	numbers to 1,000,000 compare & order to 1,000,000 rounding to 1,000,000 negative numbers Roman Numerals	column addition to more than 4-digit column subtraction to more than 4-digit estimating & approximating inverse operations multi-step problems	read & interpret line graphs draw line graphs use line graphs read & interpret tables two-way tables timetables	multiples factors common factors primes squares cubes multiply by 10, 100, 1000 divide by 10, 100, 1000	measure perimeter calculate perimeter area of rectangles area of compound shapes area of irregular shapes

Number

Measurement

Geometry

Statistics

Spring	Unit	Multiplication & Division (3 weeks)	Fractions (6 weeks)	Decimals & Percentages (3 weeks)
	NC Objectives	<p>Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for 2-digit numbers</p> <p>Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</p> <p>Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.</p> <p>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</p>	<p>Recognise and use thousandths and relate them to tenths and hundredths</p> <p>Compare and order fractions whose denominators are multiples of the same number</p> <p>Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths</p> <p>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example $2/5 + 4/5 = 6/5 = 1 + 1/5$]</p> <p>Add and subtract fractions with the same denominator and denominators that are multiples of the same number</p> <p>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</p>	<p>Read, write, order and compare numbers with up to three decimal places</p> <p>Read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$)</p> <p>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</p> <p>Round decimals with two decimal places to the nearest whole number and to one decimal place</p> <p>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</p> <p>Recognise the per 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</p> <p>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</p>
	Small Steps	<p>multiply 4 by 1</p> <p>multiply 2 by 2</p> <p>multiply 3 by 2</p> <p>multiply 4 by 2</p> <p>divide 4 by 1</p>	<p>equivalent fractions</p> <p>improper to mixed</p> <p>mixed to improper</p> <p>fraction sequences</p> <p>compare and order fractions</p> <p>add fractions</p> <p>subtract fractions</p> <p>fractions of amounts</p> <p>fractions as operators</p>	<p>decimals to 2dp</p> <p>decimals as fractions</p> <p>decimals to 3dp</p> <p>rounding decimals</p> <p>compare & order decimals</p> <p>understand percentages</p> <p>FDP</p>

Number

Measurement

Geometry

Statistics

		Decimals (4 weeks)	Properties of Shape (3 weeks)	Position & Direction (2 weeks)	Converting Units (2 weeks)	Volume (1 week)
Summer	Unit					
	NC Objectives	<p>Multiply and divide numbers involving decimals by 10, 100 and 1000</p> <p>Solve problems involving number up to three decimal places</p> <p>Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.</p>	<p>Identify 3D shapes, including cubes and other cuboids, from 2D representations</p> <p>Use the properties of rectangles to deduce related facts and find missing lengths and angles</p> <p>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</p> <p>Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</p> <p>Draw given angles, and measure them in degrees ($^{\circ}$)</p> <p>Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) other multiples of 90°</p>	<p>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</p>	<p>Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml]</p> <p>Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</p> <p>Solve problems involving converting between units of time</p>	<p>Estimate volume [for example using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]</p> <p>Use all four operations to solve problems involving measure using decimal notations including scaling.</p>
	Small Steps	<p>complements to 1</p> <p>adding decimals</p> <p>subtracting decimals</p> <p>decimal sequences</p> <p>multiply decimals by 10, 100, 1000</p> <p>divide decimals by 10, 100, 1000</p>	<p>measuring angles</p> <p>drawing angles</p> <p>drawing lines</p> <p>calculating angles</p> <p>calculating lengths</p> <p>regular v irregular</p>	<p>coordinates in 1st quadrant</p> <p>translation</p> <p>reflection</p>	<p>KG and KM</p> <p>MM & ML</p> <p>imperial units</p> <p>converting units of time</p> <p>timetables</p>	<p>what is volume</p> <p>compare volume</p> <p>estimate volume</p> <p>estimate capacity</p>