

MATHS MEDIUM TERM PLAN

Year 5 Term 1

Mental & Oral Starter Objectives

Number, Place Value and Rounding

- 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, 1000, 10 000 and 100 000.

Multiplication & Division

- 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 and divide numbers mentally drawing upon known facts.
- 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 squared (2) and cubed (3).

Fractions

- Compare and order fractions whose denominators are all multiples of the same number

Measures

- Convert between different units of metric measure.

<u>Week 1 & 2</u>	<u>Week 3 & 4</u>	<u>Week 5 & 6</u>	<u>Week 7 & 8</u>	<u>Week 9</u>	<u>Week 10</u>	<u>Week 11</u>	<u>Week 12 & 13</u>	<u>Week 14</u>
Learning to Learn Fortnight	1.Number, Place Value and Rounding	2.Addition & Subtraction	3.Multiplication & Division	4.Fractions	5.Properties of shapes	6.Position, direction & movement	7.Measures	8.Statistics
	<ul style="list-style-type: none"> • 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 10 for any given number up to 1000 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, 1000, 10 000 and 100 000. • Solve number problems and practical problems. • Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. 	<ul style="list-style-type: none"> • Add and subtract whole numbers with more than 4 digits, including using formal written methods. (columnar addition and subtraction) • Add and subtract numbers mentally with increasingly large numbers. • Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. 	<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 and divide numbers mentally drawing upon known facts. • 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 squared (2) and cubed (3). • 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. • Divide numbers up to 4 	<ul style="list-style-type: none"> • Compare and order fractions whose denominators are all 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. • Add and subtract fractions with the same denominator and denominators that are multiples of the same number. • Multiply proper fractions and mixed numbers by whole numbers, supported by 	<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. • Draw given angles, and measure them in degrees (o). • Identify: <ul style="list-style-type: none"> • Angles at a point and one whole turn (total 360o). • Angles at a point on a straight line and a turn (total 180o). 	<ul style="list-style-type: none"> • 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. 	<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 centimetres and metres. • Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and 	<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.

		<ul style="list-style-type: none"> • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 	<p>digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</p> <ul style="list-style-type: none"> • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. 	<p>materials and diagrams.</p> <ul style="list-style-type: none"> • Read and write decimal numbers as fractions. • Recognise and use thousandths <i>and relate them to tenths, hundredths and decimal equivalents.</i> • <i>Round decimals with two decimal places to the nearest whole number and to one decimal place.</i> • <i>Read, write, order and compare numbers with up to three decimal places.</i> • <i>Solve problems involving number up to three decimal places.</i> • <i>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.</i> • <i>Solve problems</i> 	<ul style="list-style-type: none"> • Other multiples of 90o • 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. 		<p>square metres (m²) and estimate the area of irregular shapes.</p> <ul style="list-style-type: none"> • Estimate volume and capacity. • Solve problems involving converting between units of time. • Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. 	
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				<i>which require knowing percentage and decimal equivalents of $1/2, 1/4, 1/5, 2/5,$ $4/5$ and those fractions with a denominator of a multiple of 10 or 25</i>				
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