

Emerald Year 5/6 Medium Term Maths Plan

- Differentiation by input see the weekly planning sheet/
- Key vocab for each learning objective is in red font /
- Resources -see the weekly planning /
- Minimum Assessment for Learning strategies for all topics = Peer Talk; targeted questioning; mini white boards; and self and peer marking
- Long term memory development strategies= Recapping previous learning at the start of each new topic / Long term memory strategy linked to the objectives on this sheet for each week
- Mathematics Cultural Capital = Applying maths investigative Skill and problem-solving skills = Try to embed these into all lessons – where applicable

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
The learning objectives must be taught in the numbered order.							
Autumn first half	<p>Number and Place Value <u>Learning Objectives</u> LO 1: Be able to read and write numbers to 1 million. LO2: Determine the value of each digit in a 7 - figure number. LO 2 : Order and compare numbers to at least 1000000 LO 3 : round any number up to 1000000 to the nearest 10, 100, 1000, 10000, 100000</p>	<p>Addition/Subtraction LO 1: To be able to add/subtract whole numbers with more than 4 digits using column method and carrying and borrowing. LO 2: add and subtract mentally with increasingly large numbers Lo 3: Use the knowledge to find inverse. LO 4: Solve addition and subtraction multi-step problems in context.</p>	<p>Multiplication LO 1: Be able to multiply by 10, 100 and 1000. LO 2: Multiply numbers up to 4 digits by a one or two digit number using a formal written method including long multiplication. LO 3: Solving problems involving multiplication</p>	<p>Division LO 1: To be able to divide by 10, 100 and 1000. LO 2: Be able to use formal methods of division including remainders. LO 3: Introduce the formal method of long division LO 4: Solving problems including division.</p>	<p>Fractions LO 1: Compare and order fractions whose denominators are all multiples of the same number. LO 2: Recognise equivalent fractions of a fraction LO 3: recognise mixed numbers and improper fractions and convert from one form to the other. LO 4: Add and subtract fractions with the same and different denominators.</p>	<p>Percentages LO 1: Recognise the per cent symbol (%) understand parts per hundred. LO 2: Write percentages as a fraction out of 100 simplify where appropriate. LO 3: Solve problems which require knowing decimal and percentage equivalents. LO 4: Solve problems involving the calculation of percentages.</p>	<p>Assessment, Review and Consolidation</p>
Autumn second half	<p>Decimals LO 1:Read and write decimal numbers as fractions. LO 2: recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. LO 3: round decimals with two decimal places to the nearest whole number and to one decimal place. LO 4: Read, write and compare numbers with up to three decimal places.</p>	<p>Measure-Area and perimeter length LO 1: Measure and calculate the area and perimeter of a rectangles and composite shapes. LO 2: Recognise that shapes with the same areas can have different perimeters and vice versa. LO 3: Recognise when it is possible to use formulae for the area of shapes. LO: Calculate the area of parallelograms and triangles</p>	<p>Measure-Weight/Capacity LO 1: Children continue to measure using the appropriate tools and units. LO 2: Use, read, write and convert between standard units of mass and volume using up to 3 decimal places. LO 3: Use all four operations to solve problems involving measure.</p>	<p>Time LO 1:Telling the time using analogue and digital. LO 2: Working with 24 hour clock. LO 3: Solving time word problems.</p>	<p>Statistics LO 1: Solve comparison, sum and difference problems using information presented in a line graph and bar chart. LO 2: Complete, read and interpret information in tables including timetables. LO: Interpret and construct pie charts and line graphs and use them to solve problems.</p>	<p>Geometry-position and direction LO 1: Describe positions on the full co-ordinate grid (all four quadrants). LO 2: Identify, describe and represent the position of a shape following a reflection or a translation. LO 3: Draw and translate simple shapes on the co-ordinate plane and reflect them in the axes.</p>	<p>Assessment, Consolidation and Review</p>
Spring first half	<p>Geometry-2D Shapes LO 1: Distinguish between regular and irregular polygons based on equal sides and angles LO 2: Draw 2-D shapes using given dimensions and angles. LO 3: Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons.</p>	<p>Geometry-3D shapes LO 1: Identify 3-D shapes, including cubes and cuboids from 2D representation LO 2: Recognise, describe and build simple 3-D shapes, including making nets.</p>	<p>Geometry, Angles, triangles LO 1: Compare and classify different types of triangle based on properties and sizes. LO 2: Be able to estimate and compare acute, obtuse and reflex angles. LO 3: Measure and draw angles in degrees. LO 4: Draw 2D shapes given dimensions and angles.</p>	<p>Number-Addition, Subtractions, Multiplication and Division LO 1: Identify common factors, common multiples and prime numbers. LO 2: Use their knowledge of the order of operations (BODMAS) to carry out calculations involving the four operations. LO 3: Solve addition and subtraction multi-step problems in contexts deciding which operations and methods to use and why,</p>	<p>Ratio and Proportion LO 1: solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication and division facts. LO 2: Solve problems involving the calculation of percentages and the use of percentages for comparison. LO 3: Solve problems involving similar shapes where the scale factor is known or can be found. LO 4: Solve problems involving unequal sharing and grouping using the knowledge of fractions and multiples.</p>	<p>Algebra LO 1: Use simple formulae LO 2: Generate and describe linear sequences. LO 3: express missing number problems algebraically LO 4: find pairs of numbers that satisfy and equation with two unknowns. LO 5: enumerate possibilities of two variables.</p>	
Spring second half	<p>Number and Place Value LO1: Interpret negative numbers in context counting forwards and backwards with positive and negative numbers including zero. LO 2: read Roman numerals to 1000 (M) and recognise years written in Roman numerals. LO 3: solve number problems and practical problems that involve the number and place value objectives.</p>	<p>Addition/Subtraction LO 1: Add and subtract numbers with more than 4 digits using formal written methods LO 2: Use rounding to check answers to calculations and determine in the context of a problem, levels of accuracy. LO 3: Solve addition and subtraction multi-step problems in contexts, deciding which operations to use and why.</p>	<p>Multiplication/division LO1: multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. LO2:divide numbers up to a 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.</p>	<p>Fractions LO 1: Use common factors to simplify fractions LO 2: compare and order fractions, including fractions > 1 Lo 3; add and subtract fractions with different denominations and mixed numbers. LO 4: Multiply simple pairs of proper fractions writing the answer in its simplest form. LO 5: multiply proper fractions and mixed numbers by whole numbers</p>	<p>Fractions, Decimals and Percentages LO 1: Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction LO 2: Multiply one -digit numbers with up to two decimal places by whole numbers. LO 3: Recall and use equivalences between simple fractions, decimals and percentages including in different contexts. LO 4: Solve problems which require knowing percentage and decimal equivalents and fractions with a denominator of 10 or 25.</p>	<p>Statistics LO 1: solve comparison, sum and difference problems using the information presented in a line graph. LO 2: complete read and interpret information in tables including timetables.</p>	<p>Assessment, Consolidation and Review</p>
Summer first half	<p>Addition/Subtraction LO 1: Pupils round answers to a specified degree of accuracy to the nearest 10, 20, 50 and 100 LO 2: Pupils use the order of operations using brackets. LO: Practise subtraction and addition mental calculations with increasingly large numbers. YEAR 6 SATS Revision</p>	<p>Multiplication/division LO 1: Understand and use the terms factor, multiple and prime, square and cube numbers. LO 2: multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. LO2:divide numbers up to a 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 Year 6 SATS Revision</p>	<p>Geometry- Properties of shapes LO 1: Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. LO 2: illustrate and name parts of a circle, including the radius, diameter and circumference and know the diameter is twice the radius. LO 3: Recognise angles where they meet at a point, are on a straight line, or are vertically opposite and find missing angles.</p>	<p>Fractions, decimals and percentages LO 1: Divide proper fractions by whole numbers. LO 2: multiply proper fractions and mixed numbers by whole numbers LO 3: associate a fraction with division and calculate decimal equivalents for a simple fraction</p>	<p>Measurement LO 1: Calculate, estimate and compare volume of cubes and cuboids using standard units including cubic centimetres (cm) and cubic metres (m) and extending to other units mm</p>	<p>Statistics LO 1: Interpret and construct pie charts and line graphs and use them to solve problems. LO 2: Calculate and interpret the mean as an average.</p>	
Summer second half	<p>Fractions, decimals and percentages LO 1: Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction LO 2: Multiply one -digit numbers with up to two decimal places by whole numbers.</p>	<p>Ratio and Proportion LO 1: solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication and division facts.</p>	<p>Algebra LO 1: Use simple formulae LO 2: Generate and describe linear sequences. LO 3: express missing number problems algebraically LO 4: find pairs of numbers that satisfy and equation with two unknowns. LO 5: enumerate possibilities of two variables.</p>	<p>YEAR 5 ASSESSMENT WEEK Measurement LO 1: Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places. LO 2: Pupils connect conversions to a graphical representation.</p>	<p>Statistics LO 1: encounter and draw graphs relating two variables arising from their own enquiry. LO 2: Connect conversion from kilometres to miles in its graphical representation. LO 3: Pupils connect their work on angles, fractions and percentages in the interpretation of pie charts.</p>	<p>Geometry-position and direction LO 1: Draw and label a pair of axes in all four quadrants with equal scaling. LO 2: Pupils draw and label rectangles, parallelograms and rhombuses specified by co-ordinates.</p>	

	<p>LO 3: Recall and use equivalences between simple fractions, decimals and percentages including in different contexts.</p> <p>LO 4: Solve problems which require knowing percentage and decimal equivalents and fractions with a denominator of 10 or 25.</p>	<p>LO 2: Solve problems involving the calculation of percentages and the use of percentages for comparison.</p> <p>LO 3: Solve problems involving similar shapes where the scale factor is known or can be found.</p> <p>LO 4: Solve problems involving unequal sharing and grouping using the knowledge of fractions and multiples.</p>		<p>LO 3: They know approximate measure conversion (metric to imperial)</p> <p>LO 4: Add and subtract positive and negative integers for measure such as temperature.</p>	<p>LO 4: Pupils know when it is appropriate to find the mean set of data.</p>	<p>LO 3: Predict missing co-ordinates using the properties of shapes. Express these algebraically.</p>	
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