Maths Medium Term

Year: 6 **Term: Spring** **Teacher: Mrs Pemberton and Mrs Collins**

Week	Topic	Objectives
Week 1	MEASURES- LENGTH, AREA AND VOLUME	Solve problems involving the calculation and conversion of units of measure using decimal notation up to three decimal places Calculate the area of rectangles and squares-link to other shapes Calculate the area of parallelograms and triangles Recognise that shapes with the same area can have different perimeter and vice versa ALGEBRA- Use the formulae for the area of shapes where possible. Find pairs of number that satisfy number sequences involving two unknowns e.g. x +y =250 g
Week 2 and 3	STATISTICS	Link pie charts to angles e.g. 360 degrees, fractions and percentages Construct pie charts and line graphs Interpret pie charts and line graphs use these to solve problems
Week 4	NUMBER AND PLACE VALUE	Read and write numbers up to 10 000 000 Order random numbers including decimal numbers up to 10 000 000 on a number line Order and compare positive and negative numbers- on a number line Determine the value of each digit in numbers up to 10 000 000 Identify the value of each digit in numbers to three decimal places Round any whole number to the nearest 10, 100, 1 000 or 10 000 using a number line Round decimals with three places to the nearest whole number or to one decimal place Use negative numbers in context and calculate intervals across zero Generate and describe and extend or complete number sequences Solve problems that involve all of the above

Week 5	ADDITION AND SUBTRACTION	Estimate answers *Consider the most appropriate strategy to solve a calculation: calculate mentally, use a jotting or a written method* *Add and subtract whole numbers and decimals using a formal written method* Use inverse to check answers to calculations Express missing number problems algebraically ALGEBRA- find pairs of number that satisfy number sequences involving two unknowns e.g. x+y= 1.5 Know how to calculate and interpret the mean as an average Solve problems which require answers to be rounded to specified degrees of accuracy Use their knowledge of the order of operations (*BODMAS*) to solve problems involving a combination of addition, subtraction, multiplication and/or division. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems involving a combination of addition, subtraction, multiplication and/or division. E.g. Calculate and interpret the mean (Average)
Week 6 AND 7	MULTIPLICATION AND DIVISION	Consider the most appropriate strategy to solve a calculation: calculate mentally, use a jotting or a written method Use inverse to check answers to calculations Multiply numbers with up to 4 digits by a two-digit whole number using a formal written method of long multiplication. Multiply one-digit numbers with up to two decimal places by whole numbers ALGEBRA- find pairs of number that satisfy number sequences involving two unknowns e.g. a x b= 36. Express missing number problems algebraically Divide numbers up to 4 digits by a two-digit number using a formal written method of short division where appropriate Divide numbers up to 4 digits by a two-digit whole number using a formal written method of long division Interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context Divide one-digit numbers with up to two decimal places by whole numbers

		Use their knowledge of the order of operations (BODMAS) to solve problems involving a combination of addition, subtraction, multiplication and/or division Solve problems which involve multiplication and/or division RATIO AND PROPORTION– Solve problems involving unequal sharing and grouping using knowledge of multiples. Solve problems involving the relative size of two quantities where missing values can be found by using multiplication or division facts Solve problems involving addition, subtraction, multiplication and /or division
Week 8	FRACTIONS	Add fractions with different denominators Subtract fractions with different denominators Add mixed numbers, using the concept of equivalent fractions Subtract mixed numbers, using the concept of equivalent fractions Link fractions with division Find decimal equivalents for simple fractions Solve problems involving fractions Multiply pairs of unit fractions, writing the answer in its simplest form (using diagram or manipulatives) Divide a unit fraction by a whole number (using diagrams or manipulatives) ALGEBRA– find pairs of number that satisfy number sequences involving two unknowns e.g. x + y= 1/2 RATIO AND PROPORTION –Solve problems involving unequal sharing and grouping using knowledge of fractions e.g. 3/5 of the class are boys
Week 9	PERCENTAGES	Recall and use equivalences between simple fractions, decimals and percentages *Find simple percentages of amounts.* Use percentages for comparison RATIO AND PROPORTION –Solve problems involving the calculation of percentages
Week 10 AND 11	MEASURES	*Practical opportunities to use measures* *Introduce concept of thousandths in context of accurate measurement* *Solve problems involving the calculation and conversion of units of measure (including money and time), using decimal notation up to three decimal places where appropriate* *Calculate, estimate and compare the volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3)*

		ALGEBRA –Use simple formulae expressed in words and find pairs of number that satisfy number sequences involving two unknowns e.g. a x b= ½ Kg *Recognise when it is possible to use the formulae for the volume of shapes.* *Tell the time on digital and analogue clock using the 24 hour clock* *Read and use timetables using the 24 hour clock* *Solve problems involving measures*
Week 12	SHAPE AND POSITION	*Describe positions on a coordinate grid (first quadrant).* Describe positions on the full coordinate grid (all four quadrants). Draw and translate simple shapes on the coordinate plane, RATIO AND PROPORTION –Solve problems involving similar shapes where the scale factor is known or can be found Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles Solve problems with shapes and /or position and direction
Week 13	STATISTICS	*Link pie charts to angles* Interpret and construct pie charts and use these to solve problems. Interpret and construct line graphs *using continuous data* and use these to solve problems e.g. to convert between miles and kilometres RATIO AND PROPORTION – *Solve comparison, sum and difference problems using information presented in all types of graph* Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts