Year 6 Medium Term Plan - Maths

Autumn Term							
Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Properties of Shape Position and Direction	Measurement	Statistics	Ratio and Algebra
2 week block	2 week block	2 week block	2 week block	2 week block	2 week block	2 week block	2 week block

Spring Term							
Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Properties of Shape Position and Direction	Measurement	Statistics	Ratio and Algebra
2 week block	2 week block	2 week block	2 week block	2 week block	2 week block	2 week block	2 week block

Summer Term							
Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Properties of Shape Position and Direction	Measurement	Statistics	Ratio and Algebra
2 week block	2 week block	2 week block	2 week block	2 week block	2 week block	2 week block	2 week block

Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Properties of Shape Position and Direction	Measurement	Statistics	Ratio and Algebra
Objectives	**Objectives**	**Objectives**	**Objectives**	**Objectives**	**Objectives**	**Objectives**	**Objectives**
Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. *I can read, write, order and compare numbers to at least 10,000,000 (ten million) and say the value of each digit.* Round any whole number to a required degree of accuracy. *I can round any number to a required degree of accuracy.* Use negative numbers in context, and calculate intervals across zero.	Perform mental calculations with mixed operations to carry out calculations involving the four operations. *I can mentally calculate using a mix of the four operations.*	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. *I can multiply numbers of up to 4 digits by a two-digit number using a formal written method.* Divide numbers up to 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, as appropriate for the context.	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. *I can use common factors and multiples to simplify fractions and express fractions in the same denomination.* Compare and order fractions, including fractions > 1. *I can compare and order fractions including those bigger than 2.* Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent	Draw 2-D shapes using given dimensions and angles. *I can draw 2-D shapes using dimensions and angles I am given.* Recognise, describe and build simple 3-D shapes, including making nets. *I can recognise, describe and build simple 3-D shapes, including making nets.* Compare and classify	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. *I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to three places if I need to.*	Interpret and construct pie charts and line graphs and use these to solve problems. *I can interpret and construct pie charts and line graphs.* *I can use these to solve problems.* Calculate and interpret the mean as an average. *I can calculate and interpret the mean as an average.*	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts e.g. find 7/9 of 108. *I can solve problems that involve the relative sizes of two things where the missing number can be found by multiplying or dividing by whole numbers.* Solve problems involving the calculation of percentages e.g.

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I can use negative numbers in context when looking at temperature or money: counting in jumps forwards and backwards through 0. Solve number and practical problems that involve ordering and comparing numbers to 10,000,000, rounding to a required degree of accuracy, using negative numbers and calculating intervals across zero. *I can solve number and practical problems that involve ordering and comparing numbers to 10,000,000, rounding to a required degree of accuracy, using negative numbers and calculating intervals across zero.* Demonstrate an understanding of place value including decimals e.g. 28.13 = 28 + ? + 0.03. I can show an understanding of place value including decimals	Solve multi-step problems in contexts, deciding which operations and methods to use and why e.g. find the change from £20 for three items that cost £1.24, £7.92 and £2.55; a roll of material is 6m long: how much is left when 5 pieces of 1.15m are cut from the roll?; a bottle of drink is 1.5 litres, how many cups of 175ml can be filled from the bottle, and how much drink is left? *I can solve problems with more than one step and operation and explain why I used them.* Solve problems involving addition and subtraction. *I can solve addition and subtraction word and practical problems.* Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. *I can use estimation to check answers to calculations and determine an appropriate degree of accuracy*	*I can divide numbers of up to 4 digits by a two-digit number using a formal written method of long division, showing remainders, fractions or rounding as appropriate.* Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. *I can divide numbers of up to 4 digits by a two-digit number using a formal written method of short division, showing remainders, fractions or rounding as appropriate.* Perform mental calculations, including with mixed operations and large numbers. *I can mentally calculate using a mix of the four operations and increasingly large numbers.* Identify common factors, common multiples and prime numbers. *I can identify common factors, multiples and prime numbers.* Use his/her knowledge of the order of operations to carry out calculations involving the four operations. *I can use the order of importance of the four operations when answering questions.* Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. *I can solve addition and subtraction multi-step problems, deciding which operations and methods to use and explain why they were suitable.* Solve problems involving addition, subtraction, multiplication and division. *I can solve problems involving addition, subtraction, multiplication and division.* Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. *I can use estimating to check answers and problem solving.*	fractions. *I can add and subtract fractions with different denominators and mixed numbers.* Multiply simple pairs of proper fractions, writing the answer in its simplest form e.g. 1/4 × 1/2 = 1/8. *I can multiply simple pairs of proper fractions, writing the answer in the simplest form such as 1/4 x 1/2 = 1/8.* Divide proper fractions by whole numbers e.g. 1/3 ÷ 2 = 1/6. *I can divide proper fractions by whole numbers such as 1/3 ÷ 2 = 1/6.* Associate a fraction with division and calculate decimal fraction equivalents e.g. know that 7 divided by 21 is the same as 7/21 and that this is equal to 1/3, and 0.375 is equivalent to 3/8. *I can link a fraction with division and work out decimal fractions such as knowing that 7 divided by 21 is the same as 7/21 and that this is equal to 1/3, and 0.378 is 3/8 as a simple fraction.* Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places. *I can explain the place value of any digit in a number with up to 3 decimal places and multiply or divide these by 10, 100 or 1000.* Multiply one-digit numbers with up to two decimal places by whole numbers. *I can multiply numbers less than 10 with up to 2 decimal places by whole numbers.* Solve problems which require answers to be rounded to specified degrees of accuracy. *I can solve problems which require answers to be rounded to specified degrees of accuracy.* Use written division methods in cases where the answer has up to two decimal places. *I can use written division methods for numbers with up to two decimal places.* Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts e.g. one piece of cake that has been cut into 5 equal slices can be expressed as 1/5 or 0.2 or 20% of the whole cake. *I can use equivalences between simple fractions, decimals and percentages to help me solve problems.*	geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. *I can compare and classify geometric shapes based on their properties and sizes. I can also find unknown angles in any triangles, quadrilaterals or regular polygons.* Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. *I can illustrate and name parts of circles, including radius, diameter and circumference. I 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. *I can recognise angles where they meet at a point, are on a straight line or are vertically opposite. I can then find any missing angles.*	Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places. *I can use, read, write and convert between standard units.* *I can convert measurement of length, mass, volume and time from a smaller unit to a larger unit and vice versa. I can do this using decimal notation up to three decimal places.* Convert between miles and kilometres. *I can convert between miles and kilometres.* Recognise that shapes with the same area can have different perimeters and vice versa. *I can recognise that shapes with the same area can have different perimeters and vice versa.* Recognise when it is possible to use formulae for the area and volume of shapes. *I can recognise when it is possible to use formulae to find the areas or volumes of shapes.* Calculate the area of parallelograms and triangles. *I can calculate the areas of parallelograms and triangles.* Calculate, estimate and compare the volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units e.g. mm³ and km³. *I can calculate, estimate and compare volumes of cubes and cuboids using standard units, including cubic centimetres (cm³), and cubic metres (m³). I can extend this to other units e.g. mm³ and km³.*		of measures, such as 15% of 360 and the use of percentages for comparison. *I can solve problems involving the calculation of percentages. I can also use percentages for comparisons.* Solve problems involving similar shapes where the scale factor is known or can be found. *I can solve problems involving shapes where the scale factor is known or can be found.* Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. *I can solve problems involving unequal sharing and grouping. I can use my knowledge of fractions and multiples to do this.* Use simple formulae e.g. perimeter of a rectangle or area of a triangle. *I can use simple formulae.* Generate and describe linear number sequences. *I can create and describe linear sequences.* Express missing number problems algebraically. *I can record missing number problems algebraically.* Find pairs of numbers that satisfy an equation with two unknowns. *I can find pairs of numbers which complete an equation with two unknowns.* Enumerate possibilities of combinations of two variables. *I can create a list of possibilities of the combination of two variables*