



Yr 6 Maths

Autumn Medium Term Plan

<u>Weeks</u>	<u>Sequence and Theme</u>	<u>National Curriculum Links</u>	<u>Learning Intentions (Small Steps)</u>	<u>Key Vocabulary</u>
1-2	Number Place Value	<ul style="list-style-type: none"> Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit Solve number and practical problems that involve the above Round any whole number to a required degree of accuracy Use negative numbers in context, and calculate intervals across zero 	<ol style="list-style-type: none"> To recognise numbers to 1,000,000 To recognise numbers to 10,000,000 To read and write numbers to 10,000,000 To use and understand powers of 10 To use a number line to 10,000,000? To order and compare numbers To round any given number To use negative numbers in context 	Numbers to ten million Powers of 10 Tenths, hundredths Decimal (places) Round (to nearest) Thousand more/less than Negative integers Count through zero Roman numerals (I to C) Numbers to one thousand, Numbers to one hundred Hundreds, Partition, recombine Hundred more/less, None Count (on/up/to/from/down) Before, after More, less, many, Few, fewer, least, fewest, smallest, greater, lesser Equal to, the same as Odd, even, Pair Units, ones, tens Ten more/less Digit, Numeral, Figure(s) Compare Size, Value Between, Halfway between, Above, below
3-7	Number Addition, Subtraction, Multiplication & Division	<ul style="list-style-type: none"> Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 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 Identify common factors, common multiples and prime numbers Identify common factors, common multiples and prime numbers Multiply multi-digit numbers up to four digits by a 2-digit whole number using the formal written method of long multiplication Perform mental calculations, including with mixed operations and large numbers Divide numbers up to four digits by a 2-digit number using the formal written method of short division where 	<ol style="list-style-type: none"> To add and subtract integers To identify common factors To identify common multiples To understand the rules of divisibility To identify prime numbers To recognise square and cube numbers To multiply 4-digit by 2-digit numbers To solve problems with multiplication To use Short division To divide using factors To Divide 4-digit by 2-digit numbers To divide 4-digit by 2-digit numbers with remainders To solve problems using division To solve multi-step problems To use the correct order of operations (BIDMAS) To use mental calculations and estimation To reason from known facts 	Order of operations (BIDMAS/BODMAS) Efficient written method Column addition and subtraction Number bonds, number line Add, more, plus, make, sum, total, altogether Inverse Double Half, halve Equals, is the same as (including equals sign) Difference between How many more to make...? How many more is...than...? How much more is... Subtract, take away, minus How many fewer is...than...? How much less is...? How many left? Common factors, common multiples Factor pairs Composite numbers, prime number, prime factors, square number, cubed number Formal written method



		<p>appropriate, interpreting remainders according to the context</p> <ul style="list-style-type: none"> Divide numbers up to four digits by a 2-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 their knowledge of the order of operations to carry out calculations involving the four operations 		<p>Multiplication facts (up to 12x12) Division facts Inverse Derive Product Multiples of four, eight, fifty and one hundred Scale up Odd, even Count in twos, threes, fives Count in tens (forwards from/backwards from) How many times? Lots of, groups of Once, twice, three times, five times Multiple of, times, multiply, multiply by Repeated addition Array, row, column Double, halve Share, share equally Group in pairs, threes, etc. Equal groups of Divide, divided by, left, left over</p>
8-9	<u>Number</u> Fractions A	<ul style="list-style-type: none"> Use common factors to simplify fractions; use common multiples to express fractions in the same denomination Compare and order fractions, including fractions > 1 Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions Identify common factors, common multiples and prime numbers Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems involving addition, subtraction, multiplication and division 	<ol style="list-style-type: none"> To recognise and simplify equivalent fractions To identify equivalent fractions using a numberline To compare and order fractions with the same denominator To compare and order fractions with the same numerator To add and subtract simple fractions To add and subtract any two fractions To add mixed numbers To subtract mixed numbers To solve multi-step fraction problems 	<p>Degree of accuracy Simplify Proper fractions, improper fractions, mixed numbers Percentage Half, quarter, fifth, two fifths, four fifths Ratio, proportion Equivalent decimals and fractions Numerator, denominator Unit fraction, non-unit fraction Compare and order Tenths Three quarters, one third, a third Equivalence, equivalent Whole Equal parts, four equal parts One half, two halves A quarter, two quarters</p>
10-11	<u>Number</u> Fractions B	<ul style="list-style-type: none"> Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams (Y5) Multiply simple pairs of proper fractions, writing the answer in its simplest form Divide proper fractions by whole numbers Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions Solve problems involving addition, subtraction, multiplication and division Associate a fraction with division and calculate decimal fraction equivalents 	<ol style="list-style-type: none"> To multiply fractions by integers To multiply fractions by fractions To divide a fraction by an integer To divide any fraction by an integer To identify the appropriate operation(s) when using fractions To find a fractions amounts To find the whole when given a fraction 	<p>Degree of accuracy Simplify Proper fractions, improper fractions, mixed numbers Percentage Half, quarter, fifth, two fifths, four fifths Ratio, proportion Equivalent decimals and fractions Numerator, denominator Unit fraction, non-unit fraction Compare and order Tenths Three quarters, one third, a third Equivalence, equivalent Whole</p>



				<p>Equal parts, four equal parts One half, two halves A quarter, two quarters</p>
12	<p><u>Measurement</u> Converting Units</p>	<ul style="list-style-type: none"> Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate 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 to up to 3 decimal places 	<ol style="list-style-type: none"> To read and write metric measures To convert metric measures To calculate using metric measures To understand the relationship between miles and kilometres To understand the relationships between imperial and metric measures 	<p>Volume Imperial units, metric units Convert Leap year Twelve hour/twenty-four-hour clock Roman numerals I to XIII Quarter past/to m/km, g/kg, ml/l Temperature (degrees) Full, half full, empty, Holds, Container Weigh, weighs, balances Heavy, heavier, heaviest, light, lighter, lightest Scales Time, Days of the week: Monday, Tuesday, etc. Seasons: spring, summer, autumn, winter Day, week, month, year, weekend Birthday, holiday Morning, afternoon, evening, night, midnight Bedtime, dinnertime, playtime Today, yesterday, tomorrow Before, after Next, last, Now, soon, early, late Quick, quicker, quickest, quickly, fast, faster, fastest, slow, slower, slowest, slowly Old, older, oldest, new, newer, newest Takes longer, takes less time Hour, o'clock, half past, Clock, watch, hands How long ago? how long will it be to...? how long will it take to...? how often? Always, never, often, sometimes, usually Once, twice, First, second, third, etc. Estimate, close to, about the same as, just over, just under, Too many, too few, not enough, enough Length, width, height, depth Long, longer, longest, short, shorter shortest, tall, taller, tallest, high, higher, highest Low, wide, narrow, deep, shallow, thick, thin Far, near, close Metre, ruler, metre stick Money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change, dear(er), costs more, costs less, cheaper, costs the same as How much? how many? Total</p>
13-15	<p>Consolidate Autumn 1 learning through recap, revision and real life experiences. * Teacher's discretion to start Spring Topic 1 in Weeks 13-15</p>			



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Spring Medium Term Plan

<u>Weeks</u>	<u>Sequence and Theme</u>	<u>National Curriculum Links</u>	<u>Learning Intentions (Small Steps)</u>	<u>Key Vocabulary</u>
1-2	<u>Number</u> Ratio	<ul style="list-style-type: none"> Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples Solve problems involving similar shapes where the scale factor is known or can be found 	<ol style="list-style-type: none"> To explore the fact that the relationship between addition and multiplication To use the language of ration To use and understand the ratio symbol To explore the relationship between ratios and fractions To use scale factors when drawing To use and describe scale factors To explore similar shapes? To solve problems involving ratio To solve problems involving proportion To apply ratio and proportion to recipes 	Ratio Proportion "For every....there are" Part Whole Scale factor Enlargement Similar shapes Length Width Perimeter
3-4	<u>Number</u> Algebra	<ul style="list-style-type: none"> Use simple formulae Generate and describe linear number sequences Find pairs of numbers that satisfy an equation with two unknowns Enumerate possibilities of combinations of two variables Express missing number problems algebraically 	<ol style="list-style-type: none"> To interpret and solve 1-step function machines To interpret and solve 2-step function machines To form expressions To use and understand substitution To understand formulae using symbols To form equations from diagrams and word descriptions To solve 1-step equations To solve 2-step equations To find pairs of values To solve problems with two unknowns 	Linear number sequence Substitute Variables Symbol Known values
5-7	<u>Number</u> Decimals	<ul style="list-style-type: none"> Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places Solve problems which require answers to be rounded to specified degrees of accuracy Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why? Multiply 1-digit numbers with up to 2 decimal places by whole numbers Use written division methods in cases where the answer has up to 2 decimal place Solve problems involving addition, subtraction, multiplication and division 	<ol style="list-style-type: none"> To understand place value within 1 To understand place value To round decimals To add and subtract decimals To multiply by 10, 100 and 1,000 To divide by 10, 100 and 1,000 To multiply decimals by integers To divide decimals by integers To multiply and divide decimals in context 	Degree of accuracy Simplify Proper fractions, improper fractions, mixed numbers Percentage Half, quarter, fifth, two fifths, four fifths Ratio, proportion Equivalent decimals and fractions Numerator, denominator Unit fraction, non-unit fraction Compare and order Tenths Three quarters, one third, a third Equivalence, equivalent Whole Equal parts, four equal parts One half, two halves A quarter, two quarters



<p>8-9</p>	<p>Number Fractions, Decimals & Percentages</p>	<ul style="list-style-type: none"> • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • Compare and order fractions, including fractions >1 • Solve problems involving the calculation of percentages and the use of percentages for comparison 	<ol style="list-style-type: none"> 1. To identify equivalent decimals and fractions 2. To look at fractions as division 3. To understand percentages 4. To convert fractions to percentages 5. To identify equivalent fractions, decimals and percentages 6. To order fractions, decimals and percentages 7. To calculate percentages of an amount using 1 step 8. To calculate percentages of an amount using multiple steps 9. To identify the whole number from a given percentage 	<p>Degree of accuracy Simplify Proper fractions, improper fractions, mixed numbers Percentage Half, quarter, fifth, two fifths, four fifths Ratio, proportion Equivalent decimals and fractions Numerator, denominator Unit fraction, non-unit fraction Compare and order Tenths Three quarters, one third, a third Equivalence, equivalent Whole Equal parts, four equal parts One half, two halves A quarter, two quarters</p>
<p>10-11</p>	<p>Measurement Area, Perimeter & Volume</p>	<ul style="list-style-type: none"> • Recognise that shapes with the same areas can have different perimeters and vice versa • Recognise when it is possible to use formulae for area and volume of shapes • Calculate the area of parallelograms and triangles • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units 	<ol style="list-style-type: none"> 1. To find the areas of shapes 2. To find the area and perimeter of rectangles and rectilinear shapes 3. To find the area of a triangle by counting squares 4. To find the area of a right-angled triangles 5. To find the area of any triangle 6. To find the area of parallelograms 7. To calculate volume by counting cubes 8. To calculate volume using formula 	<p>Volume Imperial units, metric units Convert Leap year Twelve hour/twenty-four-hour clock Roman numerals I to XIII Quarter past/to m/km, g/kg, ml/l Temperature (degrees) Full, half full, empty, Holds, Container Weigh, weighs, balances Heavy, heavier, heaviest, light, lighter, lightest Scales Time, Days of the week: Monday, Tuesday, etc. Seasons: spring, summer, autumn, winter Day, week, month, year, weekend Birthday, holiday Morning, afternoon, evening, night, midnight Bedtime, dinnertime, playtime Today, yesterday, tomorrow Before, after Next, last, Now, soon, early, late Quick, quicker, quickest, quickly, fast, faster, fastest, slow, slower, slowest, slowly Old, older, oldest, new, newer, newest Takes longer, takes less time Hour, o'clock, half past, Clock, watch, hands How long ago? how long will it be to...? how long will it take to...? how often? Always, never, often, sometimes, usually Once, twice, First, second, third, etc. Estimate, close to, about the same as, just over, just under, Too many, too few, not enough, enough Length, width, height, depth Long, longer, longest, short, shorter shortest, tall, taller, tallest, high, higher, highest Low, wide, narrow, deep, shallow, thick, thin</p>



				<i>Far, near, close</i> <i>Metre, ruler, metre stick</i> <i>Money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change, dear(er), costs more, costs less, cheaper, costs the same as</i> <i>How much? how many?</i> <i>Total</i>
12-13	<u>Statistics</u>	<ul style="list-style-type: none"> • Interpret and construct pie charts and line graphs and use these to solve problems • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs (Year 4) • Calculate and interpret the mean as an average 	<ol style="list-style-type: none"> 1. To draw, read and interpret line graphs 2. To understand dual bar charts 3. To read and interpret pie charts 4. To apply percentages to pie charts 5. To calculate and interpret the mean 	<i>Mean</i> <i>Pie chart</i> <i>Construct</i>
13	<i>Consolidate Autumn 1 learning through recap, revision and real life experiences.</i> <i>* Teacher's discretion to start Spring Topic 1 in Weeks 13-15</i>			



Yr 6 Maths Summer Medium Term Plan

<u>Weeks</u>	<u>Sequence and Theme</u>	<u>National Curriculum Links</u>	<u>Learning Intentions (Small Steps)</u>	<u>Key Vocabulary</u>
1-3	Geometry Shape	<ul style="list-style-type: none"> Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles Draw given angles, and measure them in degrees ($^{\circ}$) (Y5) Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles (Y5) Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius Draw 2-D shapes using given dimensions and angles Recognise, describe and build simple 3-D shapes, including making nets 	<ol style="list-style-type: none"> To measure and classify angles To calculate angles To identify and calculate vertically opposite angles To identify and calculate angles in a triangle To identify and calculate angles in a triangle where there are special cases To identify and calculate missing angles in a triangle To identify and calculate angles in a quadrilateral To identify and calculate angles in polygons To identify and calculate using the features of a circle To draw shapes accurately To identify 3d shape nets 	Size Bigger, larger, smaller Symmetrical, line of symmetry Fold Match Mirror line, reflection Pattern, repeating pattern Group, sort Cube, cuboids, pyramid, sphere, cone, cylinder, circle, triangle, square Shape Flat, curved, straight, round Hollow, solid Corner (point, pointed), Vertices Face, side, edge Make, build, draw Horizontal, vertical, perpendicular and parallel lines Quadrilaterals Triangles Right angle, acute and obtuse angles Regular and irregular Polygons Vertically opposite (angles) Circumference, radius, diameter
4-5	Geometry Position & Direction	<ul style="list-style-type: none"> Describe positions on the full coordinate grid (all four quadrants) Draw and translate simple shapes on the coordinate plane, and reflect them in the axes 	<ol style="list-style-type: none"> To read and plot points in the first quadrant To read and plot points in four quadrants To solve problems with coordinates To translate points and shapes To create reflections across all four quadrants 	Position Over, under, underneath, above, below, top, bottom, side On, in, outside, inside Around, in front, behind Front, back Before, after Beside, next to, opposite Apart Between, middle, edge, centre Corner Direction Left, right, up, down, forwards, backwards, sideways Across Close, far, near Along, through To, from, towards, away from Movement Slide, roll, turn, whole turn, half turn Stretch, bend Rotation Clockwise, anticlockwise



				<i>Straight line</i> <i>Ninety degree turn, right angle</i> <i>Greater/less than ninety degrees</i> <i>Orientation (same orientation, different orientation)</i> <i>Coordinates</i> <i>Translation</i> <i>Quadrant</i> <i>x-axis, y-axis</i> <i>Perimeter and area</i> <i>Reflex angle</i> <i>Dimensions</i> <i>Four quadrants</i> <i>(for coordinates)</i>
4-12	Consolidation, SATs Week, Themed projects (involving problem solving) and Transition Preparation			