



Year 6 Maths medium term planning and National Curriculum objectives



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn WRH objectives	Place value -Numbers to 1,000,000 - Numbers to 10,000,000 - Read and write numbers to 10,000,000 - Powers of 10	Place value - Number line to 10,000,000 -Compare and order any integers - Round any integer - Negative numbers	Addition, subtraction, multiplication and division -Add and subtract integers - Common factors - Common multiples - Rules of divisibility	Addition, subtraction, multiplication and division -Primes to 100 - Square and cube numbers - Multiply up to a 4-digit number by a 2-digit number (3 lessons)	Addition, subtraction, multiplication and division - solve problems with multiplication -Short division (2 lessons) - Division using factors - Introduction to long division (2 lessons)	Addition, subtraction, multiplication and division -Long division with remainders (3 lessons) - Solve problems with division
Autumn N.C objectives	Number: Place Value -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 all of the above	Number: Place Value -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 all of the above - round any whole number to a required degree of accuracy -use negative numbers in context, and calculate intervals across zero	Addition, subtraction, multiplication and division -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	Addition, subtraction, multiplication and division • Multiply multi-digit numbers up to four digits by a 2-digit whole number using the formal written method of long multiplication • Solve problems involving addition, subtraction, multiplication and division • Perform mental calculations, including with mixed operations and large numbers	Addition, subtraction, multiplication and division • Solve problems involving addition, subtraction, multiplication and division • Divide numbers up to four digits by a 2-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • 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	Addition, subtraction, multiplication and division • 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 • Solve problems involving addition, subtraction, multiplication and division -Perform mental calculations, including with mixed operations and large numbers

			and prime numbers			
	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn 2 WRH objectives	Addition, subtraction, multiplication and division - Solve multi-step problems - Order of operations - Mental calculations and estimation - Reasons for known facts	Fractions A - Equivalent fractions and simplifying - Equivalent fractions on a number line - Compare and order (denominator) - Compare and order (numerator) - Add and subtract simple fractions	Fractions A - Add and subtract any two fractions - Add mixed numbers - Subtract mixed numbers - multi-step problems	Fractions B - Multiply fractions by integers - Multiply fractions by fractions - Divide a fraction by an integer - Divide any fraction by an integer	Fractions B - Mixed questions with fractions - Fraction of an amount - Fraction of an amount - find the whole	Measurement - converting units - Metric measures - Convert metric measures - Calculate with metric measures - Miles and kilometres - Imperial measures
Autumn 2 N.C objectives	Addition, subtraction, multiplication and division • 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 • Perform mental calculations, including with mixed operations and large numbers • Use their knowledge of the order of operations to carry out calculations involving the four operations	Fractions A - Use common factors to simplify fractions; use common multiples to express fractions in the same denomination - 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	Fractions A - Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions - Identify common factors, common multiples and prime numbers - Use common factors to simplify fractions; use common multiples to express fractions in the same denomination - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Fractions B • 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	Fractions B - Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions - Multiply simple pairs of proper fractions, writing the answer in its simplest form - Divide proper fractions by whole numbers - Solve problems involving addition, subtraction, multiplication and division - Associate a fraction with division and calculate decimal fraction equivalents	Measurement - converting units - 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

	• Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy		- Solve problems involving addition, subtraction, multiplication and division			
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Spring WRH objectives	Ratio -add or multiply? - use ratio language - introduction to the ratio symbol - ratio and fractions - scale drawings	Ratio -use scale factors - similar shapes - ratio problems - proportion problems - recipes	Algebra -1-step function machines -2-step function machines -form expressions -substitution -formulae	Algebra -form equations -solve 1-step equations -solve 2-step equations -find pair of values -solve problems with two unknowns	Decimals -place value within 1 -place value-integers and decimals -round decimals -add and subtract decimals -multiply by 10,100 and 1,000	Decimals -divide by 10,100 and 1,000 -multiply decimals by integers -divide decimals by integers -multiply and divide decimals in context
Spring N.C objectives	- 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 similar shapes where the scale factor is known or can be found - solve problems involving unequal sharing and grouping using knowledge of fractions and Multiples	- 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 similar shapes where the scale factor is known or can be found - solve problems involving unequal sharing and grouping using knowledge of fractions and Multiples	Algebra - use simple formulae -generate and describe linear number sequences	Algebra - express missing number Problems algebraically - find pairs of numbers that satisfy an equation with two unknowns - enumerate possibilities of combinations of two variables	Decimals -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 -Solve problems which require answers to be rounded to specified degrees of accuracy	Decimals -multiply one-digit numbers with up to two decimal places by whole numbers use written division methods in cases where the answer has up to two decimal places - solve problems which require answers to be rounded to specified degrees of accuracy

	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Spring WRH objectives	Fractions, decimals and percentages -decimal and fraction equivalents -fractions as division -understand percentages -fractions to percentages -equivalent fractions, decimals and percentages	Fractions, decimals and percentages -order fractions, decimals and percentages -percentage of an amount - one step -percentage of an amount-multi-step -percentages - missing values	Area, perimeter and volume -shapes -same area -area and perimeter -area of a triangle - counting squares -area of right-angled triangle	Area, perimeter and volume -Area of my triangle - area of a parallelogram - volume - counting cubes - volume of a cuboid	Statistics -line graphs -dual bar charts -read and interpret pie charts	Statistics -pie charts with percentages -draw pie charts - the mean
Spring N.C objectives	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	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	Measurement - converting units - solve Problems involving the calculation and conversion of units of measure, using decimal notation up to three 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 three decimal Places - convert between miles and kilometres -calculate the area of parallelograms and Triangles	Measurement - perimeter, area and volume -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 (cm ³) and cubic metres (m ³), and extending to other units [for example, mm ³ and km ³].	Statistics -illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius -interpret and construct pie charts and line graphs and use these to solve problems	Statistics -interpret and construct pie charts and line graphs and use these to solve Problems -calculate and interpret the mean as an average.

Summer Rationale	At this stage of the year pupils have been taught all areas of the National Curriculum so the Y6 teachers are asked to analyse their formative and summative data and identify the following: • Identify gaps in knowledge across the cohort - what would all children benefit from being retaught? • Identify gaps in knowledge for individual children - what provision do these children need? Group intervention? IEP target? Following this, teachers are then asked to: • Reteach objectives previously taught but not fully understood. • Group children by their gaps and address those either through day-to-day provision or intervention. • Plan creatively so that children can apply their maths knowledge to wider areas of the curriculum. E.g. conduct science experiments collecting data, apply their position and direction skills to mapping in geography etc.
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