AUTUMN 1 - YEAR 5 MATHEMATICS OBJECTIVES- 2024 **For all units of work, problem solving and reasoning opportunities are integrated.** **Red typing refers to Year 4 objectives**			
Starters	**See objectives in the checklist**		
	TOPIC		Fluency:
Week 1, week 2, week 3	Number and Place Value *Counting games and activities*	• Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. (Start with 10,000 and build up). • Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. • Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. (Two lessons please) • Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10000 and 100,000 (Build up) • Solve number problems and practical problems that involve all of the above. • Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. • **End of unit assessment**	• Times tables focus: 6x (multiply and divide/count in different steps/ count in 60s, 0.6 etc) • Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. • count forwards and backwards with positive and negative whole numbers including through zero.
Weeks 4, 5, 6,	Addition and Subtraction	• Add and subtract numbers mentally with increasingly large numbers. • Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. • Solve addition and subtraction multi-step problems in contexts deciding which operations and methods to use and why • **End of unit assessment**	• Times tables focus: 7x (multiply and divide/ count in different steps/ count in 70s, 0.7 etc) • Add and subtract numbers mentally with increasingly large numbers (using different strategies eg. partitioning/adjusting/

			near doubles etc) • Rounding numbers quickly
Week 7	Multiplication and division	• To find factor pairs of numbers • To find common factors of two numbers • To identify multiples of numbers	• Times tables focus: 6x and 7x (multiply and divide, counting in different steps inc using place value)

AUTUMN 2 - YEAR 5 MATHEMATICS OBJECTIVES - 2024			
Starters	**See objectives in the checklist**		
	TOPIC		Fluency
Weeks 1,2 and 3	Multiplication and division continued	• Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers • Divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately for the context. • Establish whether a number up to 100 is prime or composite (non-prime) and recall prime numbers up to 19 • To find prime factors • Recognise and use the notation for square numbers (^{2}) • To recognise and use the notation for cube numbers (3) • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. • Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign. • **End of unit assessment**	• Times tables focus: 8x (multiply and divide, counting in different steps inc using place value) • Multiply and divide by 10, 100 and 1000 • Doubles and halves of numbers to 100.
Week 4	Statistics	• Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs • Present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. • Complete, read and interpret information in tables including timetables • Solve comparison, sum and difference problems using information presented in a line graph.	• Times tables focus: 9x (multiply and divide, counting in different steps inc using place value) • Multiplying by multiples of 10 eg. 60 x 4
Weeks 5 and 6	Measurement- Perimeter and area	• Measure the perimeter of rectangles and find missing sides. • Measure and calculate the perimeter of composite rectilinear	• Times tables focus: 9x (multiply and divide, counting

		shapes in cm and m. • Calculate and compare the area of rectangles (including squares), and including using standard units, cm2,m2 estimate the area of irregular shapes • Arithmetic test	in different steps inc using place value) • • Multiplying and dividing by 10,100, 1000 • Conversion of mm, cm, m, and km • Counting in units of measure.
Week 7	Time	• To read and write the time shown on analogue clocks to the nearest minute. • To read and write the time shown on analogue clocks and draw hands on a clock. • Convert between different units of measure eg hour to minute. • **End of unit assessment and arithmetic test**	• Times tables focus: 8x and 9x (multiply and divide, counting in different steps inc using place value) • Read the time on analogue clocks • Count forwards and back in different time interval, crossing the hour – use the counting stick

Spring 1 - YEAR 5 MATHEMATICS OBJECTIVES - 2025			
Starters	**See objectives in the checklist**		
	TOPIC		
Week 1	Time (continued…)	• To read and write the time shown on analogue clocks to the nearest minute. • To read and write the time shown on analogue clocks and draw hands on a clock. • Convert between different units of measure eg hour to minute.	• 9 x tables • Count forwards and back in different time interval, crossing the hour – use the counting stick
Week 2	Geometry- position and direction	• Describe positions on a 2D grid as coordinates in the first quadrant (year 4 coordinates) Revision • Describe movements between positions as translations of a given unit to the left/ right and up/ down. • Plot specified points and draw sides to complete a given polygon. • Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. Year 5	• 11 x tables • Find factors/ multiples of numbers. • Count in different multiples, including decimals eg. count in steps of 0.6
Weeks 3,4,5, 6	Fractions	• Recognise and show, using diagrams, families of common equivalent fractions. • Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. • Compare and order fractions whose denominators are multiples of the same number. • Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. • Find fractions of a number (revise from year 4) • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example + = = 1] • Read and write decimal numbers as fractions [for example 0.71 =] Add and subtract fractions whose denominators that are multiples of the same number by linking to equivalent fractions. (1/3 + 1/6)	• 11 x tables • 12 x tables • Count in different fractions, including in steps of mixed number and improper fractions • Use division and mental methods to find fractions of number, eg. find ¼ by finding ½ and then ½ again. Use that to find an 1/8 etc

Spring 2 - YEAR 5 MATHEMATICS OBJECTIVES - 2025			
Starters	**See objectives in the checklist**		
	TOPIC		
Weeks 1and 2	Geometry- properties of shape	• Identify 3D shapes, including cubes and other cuboids, from 2D representations. • Use the properties of rectangles to deduce related facts and find missing lengths and angles. • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. • Draw given angles, and measure them in degrees (o) • Identify: angles at a point and one whole turn (total 360o), angles at a point on a straight line and ½ a turn (total 180o) other multiples of 90o • End of unit assessment	• All times tables and division facts • Using multiplication known facts to solve other multiplication and divisions eg. 0.3 x 4, 60 x 80 • Add and subtract numbers mentally with increasingly large numbers (using different strategies eg. partitioning/adjusting/near doubles etc)
Weeks 3, 4 and part of week 5	Number - Place value Decimals and percentages End of year tests	• Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. (Start with 10,000 and build up). • Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. • Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10000 and 100,000 • Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. . • Find percentages of numbers. (Only find 10%, 50% and 25% in year 5) • Solve problems which require knowing percentage and decimal equivalents of , , , , and those fractions with a denominator of a multiple of 10 or 25 • **End of unit assessment**	• All times tables and division facts • Equivalent fractions and percentages • Using place value to find 10% of a number quickly • Find 50% of numbers up to 100 mentally

Week 6	Assessment and consolidation Investigations	**Assessment of skills** Complete a longer investigation.	• Multiply and divide by 10, 100 and 1000

Summer 1 - YEAR 5 MATHEMATICS OBJECTIVES - 2025			
Starters	**See objectives in the checklist**		
	Topic		
Weeks 1,2 and 3.	Fractions	• To solve money word problems (linked to last half term) • Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example + = = 1] • Add and subtract fractions whose denominators that are multiples of the same number by linking to equivalent fractions. (1/3 + 1/6) • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. • **End of unit assessment**	• Multiply and divide by 10, 100 and 1000 • Using multiplication known facts to solve other multiplication and divisions eg. 0.3 x 4, 60 x 80 • Number bonds to 100 and multiples of 100 in context of money eg. £5 - £2.87
Week 4, 5 and 6	Decimals	• Recognise and write decimal equivalents of any number of tenths or hundredths. • Recognise and write decimal equivalents to ¼, ½, ¾ starter • Read, write, order and compare numbers with up to two, then three decimal places. • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. • Round decimals with one and then two decimal places to the nearest whole number • Round decimals with one and then two decimal places to one decimal place. • Compare numbers up to three decimal places and solve problems. • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. • Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. • Add and subtract decimals with different numbers of decimal places • To solve money word problems • **End of unit assessment**	• Count in tenths, hundredths and thousandths on counting stick • Count in different decimal steps • Rounding decimals to nearest whole number, one and two decimal places • Using multiplication known facts to solve other multiplication and divisions eg. 0.3 x 4, 60 x

			80

Summer 2 - YEAR 5 MATHEMATICS OBJECTIVES - 2025			
Starters	**See objectives in the checklist**		
	TOPIC		
Weeks 1, 2 and 3	Measure - Converting units	• **Convert between different units of metric measure (for example, km and m; cm and m; cm and mm; g and kg; l and ml) See objectives below. All should include reasoning and problem solving.** • To measure mass and read a variety of scales. • To convert between units of length (cm to m and m to cm) • To convert between units of mass (g to kg and kg to g) • To measure the volume of liquid in a container and explore capacities of different containers. • To convert between units of capacity (ml to l and l to ml) • To convert between units to solve word problems. • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. • Solve problems involving converting between units of time. • To calculate time intervals**.** • **To solve money word problems** • **End of unit assessment**	• Using multiplication known facts to solve other multiplication and divisions eg. 0.3 x 4, 60 x 80 • Quick measures conversions • Number bonds to 1000 in context of measures eg. 3kg – 925g • Count in steps of measures/units of time using the counting stick
Week 4	Measure- volume	• Estimate volume [for example using 1cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] • Use all four operations to solve problems involving measure	• Multiplying three single digit numbers • Add and subtract mentally with increasingly large numbers
Week 5	Place value	• Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit.	• Count forwards and backwards in powers

		• Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10000 and 100,000 • Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero.	of 10 for any number up to 1,000,000 • Count forward and backwards in positive and negative numbers • Using multiplication known facts to solve other multiplication and divisions eg. 0.3 x 4, 60 x 80
Week 6 +	Assessment and Consolidation	**<u>Consolidation</u>** Ensure that **all** children can add and subtract 5+ digit numbers Ensure that **all** children can multiply 4 by 2 digit numbers using column multiplication and divide 4 digit by 1 digit numbers fluently using short division. Complete a longer investigation.	• Multiply and divide by 10, 100, 1000 • All times tables/division facts