AUTUMN 1 - YEAR 6 MATHEMATICS OBJECTIVES ***For all units of work, problem solving and reasoning opportunities are integrated.*** ***Red typing refers to Year 5 objectives***			
Starters	**See objectives in the checklist**		
	TOPIC		Fluency:
Week 1, 2 and 3 4 place value and baseline testing	Place Value/ decimals	• Number: place value Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit. (Begin with 1,000,000). • Round any whole number to a required degree of accuracy. (10,100, 1000, 10,000, 100,000 and 1,000,000). • Use negative numbers in context, and calculate intervals across zero. • Identify the value of each digit in numbers given to three decimal places • Solve number and practical problems that involve all of the above • To read Roman numerals to 1000 (M) and recognise years written in Roman numeral (Revision from year 5) • To multiply and divide numbers by 10, 100 and 1000 giving answers up to 3dp. • **End of unit assessment**	• Counting backwards and forwards in intervals across 0 • Multiplying and dividing by 10,100, 1000 • Quick rounding of numbers • Times tables focus: 3x, 4x, 6x (include division facts + multiples of 10 + decimals eg. 0.4 x 6)
Weeks 5 and 6	Addition, Subtraction, multiplication and division	• To ensure that I can use column addition and column subtraction confidently • Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. • Multiply multi-digit number up to 4 digits by a 2 digit number using the formal written method of long multiplication. • Divide numbers up to 4 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. • Multiply one digit numbers with up to 2dp by whole numbers within two-step word problems. • Divide numbers up to 4 digits by a 2 digit number using the formal written method of short division, interpreting remainders according to context.	• Add and subtract numbers mentally with increasingly large numbers (using different strategies eg. partitioning/adjusting/near doubles etc) • Times tables focus: 8x, 9x (include division facts + multiples of 10 + decimals eg. 0.8 x 6) Multiplying and dividing by multiples of 10 eg. 60 x 40 / 1440 divided by 12

			• Squaring numbers

AUTUMN 2 - YEAR 6 MATHEMATICS OBJECTIVES - 2022			
Starters	**See objectives in the checklist**		
	TOPIC		Fluency
Week 1 and 2	Addition, Subtraction, multiplication and division	• Divide numbers up to 4 digits by a 2 digit number using the formal written method of short division, interpreting remainders according to context. • Use written division methods in cases where the answer has up to two decimal places • To solve multi-step word problems involving the four. • Use written division methods in cases where the answer has up to two decimal places. • To investigate divisibility rules • Perform mental calculations, including with mixed operations and large numbers. • Identify common factors, common multiples and prime numbers. • Use their knowledge of the order of operations to carry out calculations involving the four operations. • 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. • **End of unit assessment**	• Times tables focus = 7x, 11x • Multiplying and dividing by multiples of 10 eg. 60 x 40 / 1440 divided by 12 • Perform mental calculations, including with mixed operations and large numbers. • Finding multiples of two digit numbers by partitioning
Weeks 3/4/5	Fractions Revise place value here	• Find equivalent fractions (revise from year 5) • To find fractions of amounts (revise from year 5) • Revise improper fractions and mixed numbers • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. • Compare and order fractions, including fractions > 1 • Generate and describe linear number sequences (with fractions) • Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example ¼ x ½ = 1/8) • Divide proper fractions by whole numbers [for example 1/3 ÷ 2 = 1/6)	• Counting in different fractions forward and backwards (include mixed number and improper fractions) • Add and subtract fractions with linked denominators • Times tables focus on 12x, 11x, 7x

		• Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example 3 /8 =] • **End of unit assessment**	
Week 6	Assessment and consolidation	• **Practice SATs papers** • **Longer investigation**	• Times tables focus = all
Week 7	Ratio	• 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 • **End of unit assessment**	• Doubles and halves of numbers to 100 • Multiplying and dividing larger numbers mentally using strategies (eg. x 4 by double and double again/ partitioning/ x5 by multiplying by 10 and halving.)

Spring 1 - YEAR 6 MATHEMATICS OBJECTIVES - 2025			
Starters	**See objectives in the checklist**		
	TOPIC		Fluency
Week 1	Ratio continue place value	• 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 • Number: place value Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit. (Begin with 1,000,000). • Use negative numbers in context, and calculate intervals across zero • To compare and order decimal numbers and to identify the value of each digit in numbers given to three decimal places (one lesson) • To multiply and divide numbers by 10, 100 and 1000 giving answers up to 3dp. • Solve problems which require answers to be rounded to specified degrees of accuracy. • To round any whole number to a required degree of accuracy. (10,100, 1000, 10,000, 100,000 and 1,000,000).	• Using multiplication known facts to solve other multiplication and divisions eg. 0.3 x 4, 60 x 80 • Counting forward and back in positive/negative numbers • Rounding any given number including decimals
Week 2	Percentages / Decimals	• Solve problems involving the calculation of percentages and finding percentages of amounts [for example, of measures and such as 15% of 360] and the use of percentages for comparison . (Umbrella objective) See below. • To find percentages of numbers using efficient strategies. (Start with multiples of 10%) • To find percentages of numbers using efficient strategies (move to multiples of 25%) • To find any percentage of a number • To solve problems involving percentages and the use of percentages for comparison. • Recall and use equivalence s between simple FDP including in different contexts.	• Quick recall – equivalent fractions and percentages • Find 10% of any number mentally • Find 50%/25% of any number mentally
Weeks	Algebra	• Use simple formulae	• Counting in different

3/4/5		• Generate and describe linear number sequences. • Express missing number problems algebraically. • Find pairs of numbers that satisfy an equation with two unknowns. • Enumerate possibilities of combinations of two variables. • **End of unit assessment**	decimal steps • Using multiplication known facts to solve other multiplication and divisions eg. 0.3 x 4, 60 x 80 • Add and subtract larger numbers mentally • Use number bonds in the context of measures/money
Week 6	Assessment and consolidation	• **Arithmetic and practice papers.** • **Longer investigation**	• Multiply and divide by 10,100,1000

Spring 2 - YEAR 6 MATHEMATICS OBJECTIVES - 2023			
Starters	**See objectives in the checklist**		
	TOPIC		Fluency:
Week 1	Geometry-position and direction Measurement converting units	• 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. • Use, read, write and convert between standard units, converting measurements of length, mass, capacity volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp. (Time conversion to be covered within time).	• Quick conversions of measures • Halving numbers up to 100 • Finding ¼ of a number by halving and halving again • Use number bonds in the context of measures/money
Week 2	Measurement-	• Recognise when it is possible to use formulae for area and volume of shapes. • Convert between miles and kilometres.	• Using multiplication known facts to solve

	Perimeter, area and volume	• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate •	other multiplication and divisions eg. 0.3 x 4, 60 x 80 •
Week 3	Volume Area and Perimeter	• To understand what is meant by the term volume • Calculate the area of parallelograms and triangles. • To calculate the area and perimeter of rectangles. • Recognise that shapes with the same areas can have different perimeters and vice versa.	• Find multiples of two-digit numbers by partitioning • Add and subtract fractions mentally
Week 4	Measurement-Perimeter, area and volume (continued…)	• Calculate the volume of cubes and cuboids • **Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm3, m3 and extending to other units (mm3, km3)** • **Convert between 12 and 24 hrs clocks and to solve problems involving conversion of time (recap lesson)** • **To calculate intervals between times and find times when given an interval (recap y5)** • Complete, read and interpret information in tables including timetables (recap y5)	• Multiply three single digit numbers • Count in steps of time • Find 10% of a number and use this to find 20% and 5%
Week 5	Assessment and consolidation	• **Arithmetic and practice papers.** •	• Using multiplication known facts to solve other multiplication and divisions eg. 0.3 x 4, 60 x 80
Weeks 6	Geometry-properties of shapes	• Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • To sort and classify 2-D shapes • To measure a variety of angles accurately • Draw 2D shapes using given dimensions and angles.	• Find equivalent fractions and percentages • Find ½, ¼, 1/8 of a number mentally • Find 10%, 20%, 5% of a number mentally

Summer 1 - YEAR 6 MATHEMATICS OBJECTIVES - 2023			
Starters	**See objectives in the checklist**		
	Topic		
Week 1	Geometry- properties of shapes (continued...)	• Compare and classify 3D shapes • Practice SATs papers and pupil review of papers	• Count in steps of different numbers, including decimals
Week 2	Geometry	• To identify the nets of 3-D shapes and build 3-D models from nets • Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. •	• Multiply and divide by 10,100, 1000 • Find 10%, 5%, 20% of a number mentally
Week 3	Statistics	• Interpret and construct pie charts and line graphs and use these to solve problems. • Calculate the mean as an average.	• Multiply fractions by fractions and integers, divide fractions by integers • Add and subtract fractions • Using multiplication known facts to solve other multiplication and divisions eg. 0.3 x 4, 60 x 80
Week 4	SATS	• SATs Arithmetic Paper 1, Reasoning Paper 2, Reasoning Paper 3	•

Week 5	Problem Solving	• Extended problem solving and investigations.	• Counting in different steps, including decimals
Week 6	Problem solving	• Extended problem solving and investigations.	• Add and subtract larger numbers mentally

SUMMER 2 - YEAR 6 MATHEMATICS OBJECTIVES - 2023		
TOPIC – poject work and transition based topics combining maths and real life scenarios		
Week 1	Money	Compare and contrast credit and debit payment methods and decide when to use them Budget a secondary school uniform To understand about different methods of payment
Week 2	Arts Week	Arts Week Maths lessons on the theme of 'Growth'
Week 3	PGL Week	Year 6 Residential to PGL and London Group (continue with wk 1 Money Week)
Week 4 (continued from wk 1)	Money	Compare different types of accounts Understand that some jobs pay more than others and that money is one factor in choosing a job Calculate simple exchange rates To plan and budget a fundraiser (link to summer fair/mini market)
Week 5 & 6	Statistics	Identify, gather, collate, present and evaluate data to help with the school upcoming environmental and sustainability project and/or Healthy Schools
Week 7	Travel	Plan, research, budget and timetable a Brookland school trip abroad To use maps, coordinates and map scales to plan and budget journey options to local secondary schools