Year 5 and Year 6 mixed age medium-term plan

Term 1			
Strand	**National Curriculum Year 5 objectives**	**National Curriculum Year 6 objectives**	**Content (Year 5 and Year 6 sub-objectives)**
Number and place value	• Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit. • Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.	• Read, write, order and compare numbers up to *10 000 000* and determine the value of each digit. • *Round any whole number to a required degree of accuracy.* • *Solve number and practical problems that involve all of the above.*	**Week 4** **Year 5 Term 1 Unit 1 Week 1: Representing integers with six or more digits** **Year 6 Term 1 Unit 1 Week 1: Fluency with large numbers** • Read and write numbers to at least 1 000 000 and determine the value of each digit. • Read, write, order and compare numbers to at least 1 000 000. • Count forwards or backwards in steps of powers of 10 for any multiple of a power of 10 up to 1 000 000. • Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. • Read and write numbers up to 10 000 000 and determine the value of each digit. • Read, write, order and compare numbers up to *10 000 000*. • *Round any whole number to a required degree of accuracy.* • *Solve number problems that involve all of the above.* • *Solve practical problems that involve all of the above.*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Addition and subtraction (Y5) Addition, subtraction, multiplication and division (Y6)	• Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. • Multiply numbers up to four digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers. • Multiply and divide numbers mentally drawing upon known facts. • Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes.	• Multiply multi-digit numbers up to four digits by a 2-digit whole number using the formal written method of long multiplication. • 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. • 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. • Perform mental calculations, including with mixed operations and large numbers. • 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. • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	**Week 5** **Year 5 Term 1 Unit 2 Week 2: Multiplicative properties of numbers: factors and multiples** **Year 6 Term 1 Unit 2 Week 2: Understanding multi-digit multiplication** • Identify multiples and factors, including finding all factor pairs of a number. • Identify multiples and factors, including finding common factors of two 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.* • *Identify common factors, common multiples and prime numbers.* • *Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.* **Week 6** **Year 5 Term 1 Unit 2 Week 3: Efficient multiplication: mental and written methods** **Year 6 Term 1 Unit 2 Week 3: Understanding multi-digit division methods** • Multiply numbers up to four digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers. • Multiply numbers mentally drawing upon known facts. • Divide numbers mentally drawing upon known facts. • *Divide numbers up to four digits by a 2-digit whole number using the formal written method of long division.* • *Divide numbers up to four digits by a 2-digit number using the formal written method of short division where appropriate.* • *Perform mental calculations, including with mixed operations and large numbers.* **Week 7** **Year 5 Term 1 Unit 2 Week 4: Solving problems involving multiplication and division** **Year 6 Term 1 Unit 2 Week 4: Solving problems using all four operations** • Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes. • *Divide numbers up to four digits by a 2-digit number, interpreting remainders according to the context.* • *Interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.* • *Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why.* • *Solve problems involving addition, subtraction, multiplication and division.*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)

Geometry: properties of shapes	• Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.
	• Draw given angles, and measure them in degrees (°).
	• Identify:
	  ◦ angles at a point and one whole turn (total 360°);
	  ◦ angles at a point on a straight line and ½ a turn (total 180°);
	  ◦ other multiples of 90°.
		• *Draw 2D shapes using given dimensions and angles.*
		• *Recognize, describe and build simple 3D shapes, including making nets.*
			Week 8
			Year 5 Term 1 Unit 3 Week 5: Estimating, measuring, drawing and using angles
			Year 6 Term 1 Unit 3 Week 5: Constructing 2D and 3D shapes
			• Know angles are measured in degrees.
			• Estimate and compare acute, obtuse and reflex angles.
			• Draw given angles and measure them in degrees (°).
			• Identify angles at a point and one whole turn (total 360°).
			• Identify angles at a point on a straight line and ½ a turn (total 180°).
			• Identify other multiples of 90°.
			• *Draw 2D shapes using given dimensions and angles.*
			• *Recognize, describe and build simple 3D shapes.*
			• *Make nets of simple 3D shapes.*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Fractions	• Compare and order fractions whose denominators are all multiples of the same number. • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. • Recognize mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $^2/_5 + ^4/_5 = ^6/_5 = 1\ ^1/_5$). • Add and subtract fractions with the same denominator and denominators that are multiples of the same number. • Read and write decimal numbers as fractions (e.g. 0.71 = $^{71}/_{100}$). • Recognize and use thousandths and relate them to tenths, hundredths and decimal equivalents.	• 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.* • *Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$).* • *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.* • *Multiply 1-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.* • Recall and use equivalences between simple fractions, decimals *and percentages, including in different contexts.*	**<u>Week 9</u>** **Year 5 Term 1 Unit 4 Week 7: Fractions in different forms** **Year 6 Term 1 Unit 4 Week 6: Using equivalences** • Compare and order fractions whose denominators are all multiples of the same number. • Identify, name and write equivalent fractions of a given fraction, represented visually. • Recognize mixed numbers and improper fractions. • Convert mixed numbers and improper fractions from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $^2/_5 + ^4/_5 = ^6/_5 = 1\ ^1/_5$). • *Use common multiples to express fractions in the same denomination.* • *Compare and order fractions, including fractions > 1.* • *Associate a fraction with division.* • *Calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$).* • *Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.* **<u>Week 10</u>** **Year 5 Term 1 Unit 4 Week 8: Adding and subtracting fractions** **Year 6 Term 1 Unit 4 Week 7: Adding and subtracting fractions to solve problems** • Add and subtract fractions with the same denominator. • Add and subtract fractions with denominators that are multiples of the same number. • *Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.* **<u>Week 11</u>** **Year 5 Term 1 Unit 4 Week 9: Decimal fractions** **Year 6 Term 1 Unit 4 Week 8: Multiplying and dividing decimals to solve problems** • Identify, name and write equivalent fractions, represented visually, including tenths and hundredths. • Read and write decimal numbers as fractions (e.g. 0.71 = $^{71}/_{100}$). • Recognize and use thousandths and relate them to tenths, hundredths and decimal equivalents. • *Identify the value of each digit in numbers given to three decimal places.* • *Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.* • *Multiply 1-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.*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Ratio and proportion (Y6)	Year 5 Consolidation week	• *Solve problems involving the calculation of percentages, e.g. of measures, and such as 15% of 360, and the use of percentages for comparison.*	**Week 12** **Year 5 Consolidation week** **Year 6 Term 1 Unit 5 Week 9: Working with proportions in ratio and percentage context** • *Solve problems involving the calculation of percentages, e.g. of measures, and such as 15% of 360, and the use of percentages for comparison.*
			Week 13 **Year 3 Term 1 Unit 4 Week 8: Problem solving in multiplicative contexts** **Year 4 Term 1 Unit 4 Week 8: Multiplying larger numbers** • Recall and use multiplication and division facts for the [2, 5, 10] 4 and 8 multiplication tables. • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental methods. • *Multiply 2-digit numbers by a 1-digit number using formal written layout.* • *Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by one digit.*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Measurement	• Convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. • Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. • Estimate volume (e.g. using 1 cm^3 blocks to build cuboids including cubes) and capacity (e.g. using water). • Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation, including scaling.	• 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.* ◦ *Recognize when it is possible to use formulae for area and volume of shapes.* ◦ *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).*	**Week 13** **Year 5 Term 1 Unit 6 Week 11: Estimate, measure and solve perimeter problems** **Year 6 Term 1 Unit 6 Week 10: Estimating, comparing and calculating volumes** • Convert between different units of metric measure, e.g. centimetre and metre; centimetre and millimetre. • Understand and use approximate equivalences between metric units and common imperial units, e.g. feet, inches. • Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. • Use addition and subtraction to solve problems involving measure (e.g. length) using decimal notation. • Use all four operations to solve problems involving measure (e.g. length) including scaling. ◦ *Recognize when it is possible to use formulae for volume of shapes.* ◦ *Calculate volume of cubes and cuboids using standard units (cm^3, m^3).* ◦ *Estimate volume of cubes and cuboids using standard units (cm^3, m^3).* ◦ *Compare volume of cubes and cuboids using standard units (cm^3, m^3).* ◦ *Calculate, estimate and compare volume of cubes and cuboids using standard units, extending to other units (e.g. mm^3 and km^3).*
			Week 14 **Year 5 Term 1 Unit 6 Week 12: Converting between units of measure for volume and capacity** **Year 6 Term 1 Unit 6 Week 11: Converting between units of measure** • Convert between different units of metric measure, e.g. litre and millilitre. • Understand and use approximate equivalences between metric units and common imperial units, e.g. pints. • Estimate volume (e.g. using 1 cm^3 blocks to build cuboids including cubes) and capacity (e.g. using water). • Use addition and subtraction to solve problems involving measure (e.g. volume) using decimal notation. • Use all four operations to solve problems involving measure (e.g. volume) including scaling. ◦ *Solve problems involving the calculation of units of measure, using decimal notation up to three decimal places where appropriate.* ◦ *Solve problems involving the conversion of units of measure, using decimal notation up to three decimal places where appropriate.* ◦ *Use, read and write standard units of length, mass and volume using decimal notation to up to three decimal places.* ◦ *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.*

Term 2			
Strand	**National Curriculum Year 5 objectives**	**National Curriculum Year 6 objectives**	**Content (Year 5 and Year 6 sub-objectives)**
Addition and subtraction (Y 5) Algebra (Y6)	• Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction). • Add and subtract numbers mentally with increasingly large numbers. • 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.	• *Use simple formulae.* • *Express missing number problems algebraically.*	**Week 1** **Year 5 Term 1 Unit 5 Week 10: Adding and subtracting using different methods** **Year 6 Term 1 Unit 7 Week 12: Using letters to represent unknown numbers** • Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction). • Add and subtract numbers mentally with increasingly large numbers. • 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. • *Use simple formulae.* • *Express missing number problems algebraically.*
Geometry: position and direction (Y6)	Year 5 Consolidation week	• *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.*	**Week 2** **Year 5 Consolidation week** **Year 6 Term 1 Unit 8 Week 13: Points, lines, shapes and translations on the four-quadrant coordinate plane** • *Describe positions on the coordinate grid (all four quadrants).* • *Draw simple shapes on the coordinate plane.*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Number and place value	• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. • Solve number problems and practical problems that involve all of the above.	• Use negative numbers in context, and *calculate intervals across zero*. • Solve number and practical problems that involve all of the above.	**Week 3** **Year 5 Term 3 Unit 15 Week 1: Interpreting and solving problems involving negative numbers in context** **Year 6 Term 2 Unit 9 Week 1: Negative numbers in context, including counting on and back and in sequences** • Interpret negative numbers in context. • Count forwards and backwards with positive and negative whole numbers, including through zero. *Use negative numbers in context.* • *Calculate intervals across zero.* • *Solve number problems that involve all of the above.* • *Solve practical problems that involve all of the above.*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Multiplication and division (Y5) Addition, subtraction, multiplication and division (Y6)	• Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • Establish whether a number up to 100 is prime and recall prime numbers up to 19. • Multiply and divide numbers mentally drawing upon known facts. • Divide numbers up to four digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for 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.* • 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. • 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 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.*	**<u>Week 4</u>** **Year 5 Term 2 Unit 8 Week 2: Primes, composites, multiples and factors** **Year 6 Term 2 Unit 10 Week 2: Reasoning about the order used to solve calculations** • Know and use the vocabulary of prime numbers and composite (non-prime) numbers. • Establish whether a number up to 100 is prime and recall prime numbers up to 19. ◦ *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.* **<u>Week 5</u>** **Year 5 Term 2 Unit 8 Week 3: Calculating using mental and written methods for division** **Year 6 Term 2 Unit 10 Week 3: Mixed operations** • Divide numbers mentally drawing upon known facts. • Divide numbers up to four digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context. ◦ *Divide numbers up to four digits by a 2-digit whole number using the formal written method of long division.* ◦ *Divide numbers up to four digits by a 2-digit number using the formal written method of short division where appropriate.* ◦ *Perform mental calculations, including with mixed operations and large 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.* ◦ *Multiply multi-digit numbers up to four digits by a 2-digit whole number using the formal written method of long multiplication.* ◦ *Divide numbers up to four digits by a 2-digit number using the formal written method of short division where appropriate.*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and 6 Year sub-objectives)
Geometry: position and direction	• 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.	• Draw and translate simple shapes on the coordinate plane, *and reflect them in the axes*.	**Week 6** **Year 5 Term 2 Unit 14 Week 10: Reflecting and translating shapes in the first quadrant** **Year 6 Term 2 Unit 11 Week 4: Reflections and translations in all four quadrants** • Identify, describe and represent the position of a shape following a reflection, using the appropriate language, and know that the shape has not changed. • Identify, describe and represent the position of a shape following a translation, using the appropriate language, and know that the shape has not changed. ◦ *Translate simple shapes on the coordinate plane.* ◦ *Draw simple shapes on the coordinate plane and reflect them in the axes.*
Fractions	• Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. • Recognize mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $^2/_5 + {}^4/_5 = {}^6/_5 = 1\ {}^1/_5$). • Read and write decimal numbers as fractions (e.g. 0.71 = $^{71}/_{100}$). • Recognize and use thousandths and relate them to tenths, hundredths and decimal equivalents. • Read, write, order and compare numbers with up to three decimal places. • Recognize 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.	• 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.* ◦ *Multiply simple pairs of proper fractions, writing the answer in its simplest form (for example, $^1/_4 \times {}^1/_2 = {}^1/_8$).* ◦ *Divide proper fractions by whole numbers (for example, $^1/_3 \div 2 = {}^1/_6$).* ◦ *Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$).* ◦ *Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.*	**Week 7** **Year 5 Term 2 Unit 10 Week 5: Understanding equivalences** **Year 6 Term 2 Unit 12 Week 5: Using equivalences and solving problems** • Identify, name and write equivalent fractions, represented visually, including tenths and hundredths. • Recognize mixed numbers and improper fractions. • Convert mixed numbers and improper fractions from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $^2/_5 + {}^4/_5 = {}^6/_5 = 1\ {}^1/_5$). • Read and write decimals numbers as fractions (e.g. 0.71 = $^{71}/_{100}$). • Recognize and use thousandths and relate them to tenths, hundredths and decimal equivalents. • Read, write, order and compare numbers with up to three decimal places. ◦ *Use common factors to simplify fractions.* ◦ *Use common multiples to express fractions in the same denomination.* ◦ *Compare and order fractions, including fractions > 1.* ◦ *Associate a fraction with division.* ◦ *Calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$).* ◦ *Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.*
			Week 8 **Year 5 Term 2 Unit 10 Week 6: Percentages** **Year 6 Term 2 Unit 12 Week 6: Multiplying and dividing fractions to solve problems** • Recognize the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred'. • Write percentages as a fraction with denominator 100, and as a decimal. ◦ *Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $^1/_4 \times {}^1/_2 = {}^1/_8$).* ◦ *Divide proper fractions by whole numbers (e.g. $^1/_3 \div 2 = {}^1/_6$).*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Statistics	• Solve comparison, sum and difference problems using information presented in a line graph.	• Interpret *and construct pie charts and* line graphs and use these to solve problems.	**Week 9** **Year 5 Term 2 Unit 11 Week 7: Line graphs** **Year 6 Term 2 Unit 13 Week 7: Working with graphs and pie charts** • Solve comparison problems using information presented in a line graph. • Solve sum and difference problems using information presented in a line graph. ◦ *Interpret pie charts and use these to solve problems.* ◦ *Construct pie charts and use these to solve problems.* ◦ *Interpret line graphs and use these to solve problems.* ◦ *Construct line graphs and use these to solve problems.*
Addition and subtraction (Y5) Algebra (Y6)	• Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction). • Add and subtract numbers mentally with increasingly large numbers. • 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.	◦ *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.*	**Week 10** **Year 5 Term 2 Unit 12 Week 8: Missing numbers and solving problems in context** **Year 6 Term 2 Unit 14 Week 8: Using algebra to describe sequences and equations with two unknown values** • Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction). • Add and subtract numbers mentally with increasingly large numbers. • 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. ◦ *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.*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Measurement	• Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes.	• *Recognize that shapes with the same areas can have different perimeters and vice versa.* • *Recognize when it is possible to use formulae for area and volume of shapes.* • *Calculate the area of parallelograms and triangles.*	**Week 11** **Year 5 Term 2 Unit 13 Week 9: Calculating, estimating and comparing areas** **Year 6 Term 2 Unit 15 Week 9: Areas of parallelograms, triangles and related shapes** • Calculate the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2). • Compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2) • Estimate the area of irregular shapes. • *Recognize that shapes with the same areas can have different perimeters and vice versa.* • *Recognize when it is possible to use formulae for area of shapes.* • *Calculate the area of parallelograms.* • *Calculate the area of triangles.*
Ratio and proportion (Y6)	Year 5 Consolidation week • This time could be used to recap angles work Term 1 Week 5 Unit 3 as pre-teaching for next geometry unit.	• *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.*	**Week 12** **Year 5 Consolidation week** **Year 6 Term 2 Unit 16 Week 10: Solving problems in proportional share situations** • *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.*
Number and place value (Y5)	• Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit. • Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. • Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000. • Solve number problems and practical problems that involve all of the above.	Year 6 Consolidation week	**Week 13** **Year 5 Term 2 Unit 7 Week 1: Large positive integers are all around us** **Year 6 Consolidation week** • Read and write numbers to at least 1 000 000 and determine the value of each digit. • Read, write, order and compare numbers to at least 1 000 000. • Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. • Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000. • Solve number problems that involve all of the above. • Solve practical problems that involve all of the above.

Term 3			
Strand	**National Curriculum Year 5 objectives**	**National Curriculum Year 6 objectives**	**Content (Year 5 and Year 6 sub-objectives)**

Geometry: properties of shapes	• Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.
	• Draw given angles, and measure them in degrees (°).
	• Identify:
	  ◦ angles at a point and one whole turn (total 360°);
	  ◦ angles at a point on a straight line and ½ a turn (total 180°);
	  ◦ other multiples of 90°.
	• 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.
		• *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.*
		• *Recognize angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.*
			Week 1
			Year 5 Term 1 Unit 3 Week 6: Reasoning and problem-solving with angles
			Year 6 Term 2 Week 11 Unit 17: Applying angle properties and relationships to work out the values of unknown angles
			• Know angles are measured in degrees.
			• Estimate and compare acute, obtuse and reflex angles.
			• Draw given angles and measure them in degrees (°).
			• Identify angles at a point and one whole turn (total 360°).
			• Identify angles at a point on a straight line and ½ a turn (total 180°).
			• *Compare and classify geometric shapes based on their properties and sizes.*
			• *Find unknown angles in any triangles, quadrilaterals, and regular polygons.*
			• *Recognize angles where they meet at a point, are on a straight line, or are vertically opposite.*
			• *Find missing angles.*

			Week 2 **Year 5 Term 2 Unit 9 Week 4: Constructing shapes with given properties** **Year 6 Term 2 Unit 17 Week 12: Shapes and their properties, including circles** • Use the properties of rectangles to deduce related facts. • Find missing lengths and angles. • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • Estimate and compare acute, obtuse and reflex angles. • Draw given angles, and measure them in degrees (°). • *Compare and classify geometric shapes based on their properties and sizes.* • *Illustrate and name parts of circles, including radius, diameter and circumference.* • *Know that the diameter is twice the radius.*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Multiplication and division (Y5) Statistics (Y6)	• Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. • Recognize and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}). • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.	◦ *Calculate and interpret the mean as an average.*	**Week 3** **Year 5 Term 3 Unit 16 Week 2: Recognize and represent square and cube numbers** **Year 6 Term 3 Unit 18 Week 1: Calculate and interpret the mean as an average** • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • Recognize and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}). ◦ *Calculate the mean.* ◦ *Interpret the mean as an average.*
Multiplication and division (Y5) Addition, subtraction, multiplication and division (Y6)	• Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. • Recognize and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}). • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	• 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 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.	**Week 4** **Year 5 Term 3 Unit 16 Week 3: Multiply and divide whole and decimal numbers by 10, 100 and 1000 (continued)** **Year 6 Term 3 Unit 19 Week 2: Solving and comparing multi-step problems** • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. ◦ *Perform mental calculations, including with mixed operations and large numbers.* ◦ *Solve problems involving addition, subtraction, multiplication and division.* ◦ *Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.* **Week 5** **Year 5 Term 3 Unit 16 Week 4: Solve problems strategically, using squares, cubes, equivalence and simple rates (continued)** **Year 6 Term 3 Unit 19 Week 3: Number and calculation relationships and properties** • Recognize and use square numbers and cube numbers, and the notation for squared (2) and cubed (3). • Solve problems, involving addition, subtraction, multiplication and division, and a combination of these, including understanding the meaning of the equals sign. • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. ◦ *Identify common factors, common multiples and prime numbers.* ◦ *Perform mental calculations, including with mixed operations and large numbers.*

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Fractions	• Recognize mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $^2/_5 + ^4/_5 = ^6/_5 = 1\ ^1/_5$). • Add and subtract fractions with the same denominator and denominators that are multiples of the same number. • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. • Read, write, order and compare numbers with up to three decimal places. • Recognize 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. • Solve problems which require knowing percentage and decimal equivalents of $^1/_2$, $^1/_4$, $^1/_5$, $^2/_5$, $^4/_5$ and those fractions with a denominator of a multiple of 10 or 25.	• *Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$).* • *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.* • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	**<u>Week 6</u>** **Year 5 Term 3 Unit 18 Week 6: Operating on fractions** **Year 6 Term 3 Unit 20 Week 4: Solving problems involving fractions, decimals and percentages** • Recognize mixed numbers and improper fractions. • Convert mixed numbers and improper fractions one form to the other and write mathematical statements > 1 as a mixed number (e.g. $^2/_5 + ^4/_5 = ^6/_5 = 1\ ^1/_5$). • Add and subtract fractions with the same denominator. • Add and subtract fractions with denominators that are multiples of the same number. • Multiply proper fractions by whole numbers, supported by materials and diagrams. • Multiply mixed numbers by whole numbers, supported by materials and diagrams. • *Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.* • *Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.* • *Solve problems which require answers to be rounded to specified degrees of accuracy.*
			<u>Week 7</u> **Year 5 Term 3 Unit 18 Week 7: Percentages and problem solving** **Year 6 Term 3 Unit 20 Week 5: Working with percentages, decimals and fractions** • Recognize the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred'. • Write percentages as a fraction with denominator 100, and as a decimal. • Read, write, order and compare numbers with up to three decimal places. • Solve problems which require knowing percentage and decimal equivalents of $^1/_2$, $^1/_4$, $^1/_5$, $^2/_5$, $^4/_5$ and those fractions with a denominator of a multiple of 10 or 25. • Identify the value of each digit in numbers given to three decimal places. • 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. • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Ratio and proportion (Y6)	Year 5 Consolidation week	• *Solve problems involving the calculation of percentages (e.g. of measures, and such as 15% of 360) and the use of percentages for comparison.* • *Solve problems involving similar shapes where the scale factor is known or can be found.*	**Week 8** **Year 5 Consolidation week** •
Geometry: properties of shapes (Y5)	• Identify 3D shapes, including cubes and other cuboids, from 2D representations.	Year 6 Secondary progression work	**Week 9** **Year 5 Term 3 Unit 17 Week 5: Identifying and naming 3D shapes from 2D representations** • Identify 3D shapes, including cubes and other cuboids, from 2D representations.
Statistics (Y5)	• Complete, read and interpret information in tables, including timetables.	Year 6 Secondary progression work	**Week 10** **Year 5 Term 3 Unit 19 Week 8: Presenting and interpreting data in tables** • Complete, read and interpret information in tables, including timetables.
Addition and subtraction (Y5)	• Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction). • Add and subtract numbers mentally with increasingly large numbers. • 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.	Year 6 Secondary progression work	**Week 11** **Year 5 Term 3 Unit 20 Week 9: Making decisions when calculating** • Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction). • Add and subtract numbers mentally with increasingly large numbers. • 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.

Strand	National Curriculum Year 5 objectives	National Curriculum Year 6 objectives	Content (Year 5 and Year 6 sub-objectives)
Measurement (Y5)	• Convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). • 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. • Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation, including scaling.	• Year 6 Secondary progression work	**Week 12** **Year 5 Term 3 Unit 21 Week 10: Metric and imperial units in everyday contexts** • Convert between different units of metric measure (e.g. gram and kilogram). • Understand approximate equivalences between pounds and kilograms. • Use approximate equivalences between pounds and kilograms. • Use addition and subtraction to solve problems involving mass and money using decimal notation. • Use all four operations to solve problems involving mass and money, including scaling. • Solve problems involving converting between units of time.
SATs week			This week needs to be scheduled within Term 3 according to term and testing dates