	Autumn Term	Spring Term	Summer Term
Week 1	Number and Place Value: Numbers to 10 million	Measurements: Measurements	Geometry: Position and Direction
Week 2			
Week 3	Calculations: Four Operations on Whole Numbers	Number and Place Value: Negative Numbers	Statistics: Graphs and Averages
Week 4		Fractions, Decimals and Percentages: Percentages	
Week 5		Ratio and Proportion	SATs
Week 6		Algebra	Geometry: Properties and Shapes
Week 7	Fractions, Decimals and Percentages: Fractions		
Week 8		Measurement: Area, Perimeter and Volume	Geometry: Position and Direction
Week 9			
Week 10	Fractions, Decimals and Percentages: Decimals		Statistics: Graphs and Averages
Week 11			Revision
Week 12		Geometry: Properties and Shapes	Revisit Topics

Number and Place Value: Numbers to 10 million

	Objective
Lesson 1	To construct and record numbers to 10,000,000; to recognise the value of digits to 10,000,000
Lesson 2	To compare numbers to 10 000 000 using place value.
Lesson 3	To compare and order numbers to 10 000 000; to create combinations of numbers using a fixed number of digits.
Lesson 4	To round numbers to 10 000 000 to the nearest miliion, hundred thousand and ten thousand.
Lesson 5	To round numbers to the nearest appropriate number up to and including millions; to determine when rounding is appropriate and to which value.
Consolidation	To practise various concepts covered in the chapter

Calculations: Four Operations on Whole Numbers

Lesson 1	To use multiple operations and create expressions from a picture; to use the order of operations to solve expressions.
Lesson 2	To create and solve expressions using the four operations.
Lesson 3	To multiply numbers by multiples of 10; to use number bonds as a key strategy in multiplication.
Lesson 4	To multiply 3- and 4-digit numbers by 2-digit numbers without regrouping or renaming; to use both number bonds and the column method as key strategies.
Lesson 5	To multiply 3- and 4-digit numbers by 2-digit numbers without regrouping or renaming; to use both number bonds and the column method as key strategies.
Lesson 6	To multiply 3- and 4-digit numbers by 2-digit numbers with regrouping and renaming; to use number bonds and pattern recognition as key strategies for multiplication.
Lesson 7	To multiply 3- and 4-digit numbers by 2-digit numbers with regrouping and renaming; to use number bonds and the column method as key strategies.
Lesson 8	To estimate products of multiplying 3- and 4-digit numbers by a 2-digit numbers; to use knowledge of multiplication to create specific products.
Lesson 9	To divide 3-digit numbers by 2-digit numbers using a variety of strategies; to use number bonds, long division and bar models to facilitate division by 2-digit numbers.
Lesson 10	To divide 4-digit numbers by 2-digit numbers; to use number bonds and long division as the key strategies.
Lesson 11	To divide 4-digit numbers by 2-digit numbers using a variety of methods; to use number bonds, long and short division as key methods.
Lesson 12	To divide 3-digit numbers by 2-digit numbers giving rise to remainders; to use number bonds and long and short division as key strategies to solve division problems
Lesson 13	To divide 4-digit numbers by 2-digit numbers giving rise to a remainder; to represent the remainder as part of a whole amount of money or decimal.
Lesson 14	To use the bar model heuristic to solve word problems involving multiplication and division.
Lesson 15	To solve word problems using division as the main strategy; to use pictorial representations to support word problems.
Lesson 16	To solve word problems involving multiple operations, including multiplication and division.
Lesson 17	To find common multiples in real-life situations; to use common multiples in tandem with knowledge of time.
Lesson 18	To use common multiples to solve problems; to organise mathematical thinking into tables and lists.
Lesson 19	To find the largest common factor of 3-digit numbers; to use multiplication and division to find largest common factors
Lesson 20	To find common factors using concrete materials
Lesson 21	To use prime numbers to create other numbers; to explore prime numbers above 100.
Lesson 22	To explore prime numbers using concrete materials; to identify prime numbers using multiplication or division.
Lesson 23	To practise various concepts covered in the chapter.

Fractions, Decimals and Percentages: Fractions

Lesson 1	To use concrete materials to simplify fractions; to recognise equivalence in fractions to $1/4$.
Lesson 2	To simplify fractions using division and common factors; to represent fractions using concrete materials and pictorial representations.
Lesson 3	To compare fractions and place them in order from smallest to largest.
Lesson 4	To compare and order fractions by finding common denominators.
Lesson 5	To compare and order fractions using common factors.
Lesson 6	Adding and subtracting fractions with different denominators; using pictorial representations to compare fractions and add/subtract.
Lesson 7	To add and subtract fractions with different denominators.
Lesson 8	To add and subtract mixed numbers, including fractions with different denominators; to subtract from the whole and add the remainder back on.
Lesson 9	To add and subtract fractions with different denominators; to add and subtract mixed numbers.
Lesson 10	To multiply fractions using pictorial representations and abstract methods.
Lesson 11	To determine if the commutative law applies to fractions; to multiply fractions using concrete materials and pictorial representations.
Lesson 12	To use concrete materials to understand and solve the multiplication of fractions; to simplify equations using pattern blocks.
Lesson 13	To divide a fraction by a whole number; to use pictorial representation to divide whole numbers into fractions.
Lesson 14	To divide fractions by whole numbers using concrete materials and pictorial representations; to divide fractions when the numerator and divisor are not easily divisible.
Lesson 15	To divide fractions by a whole number; to use pictorial representations to support division.
Chapter consolidation	To practise various concepts covered in the chapter.

Fractions, Decimals and Percentages: Decimals

Lesson 1	To read and write decimals to thousandths; to use concrete materials to represent decimals.
Lesson 2	To divide whole numbers by larger whole numbers; to use Base 10 materials to represent tenths, hundredths and thousandths.
Lesson 3	To divide whole numbers that give rise to decimals; to calculate decimal fraction equivalents using long division.
Lesson 4	To convert fractions into decimals using bar models and long division.
Lesson 5	To write fractions as decimals; to use long division as the key strategy for turning fractions into decimals.
Lesson 6	To multiply decimals by whole numbers using partitioning or the worded method to help find the solution.
Lesson 7	To multiply whole numbers that include a decimal by other whole numbers; to use partitioning and the worded method as key strategies.
Lesson 8	To multiply decimals by whole numbers, including regrouping and renaming.
Lesson 9	To multiply decimals by whole numbers using a variety of methods; to use the heuristic 'making a list' to help solve a problem.
Lesson 10	To divide decimals using number bonds and number discs as the key strategies.
Lesson 11	To divide decimals using bar models, number bonds and long division as key strategies, including regrouping and renaming.
Lesson 12	To multiply decimals by a 2-digit whole number using number discs and the column method.
Lesson 13	To divide decimals by 2-digit numbers using number bonds and the worded method.
Lesson 14	To divide decimals by 2-digit whole numbers using number bonds and the worded method.
Chapter consolidation	To practise various concepts covered in the chapter.

Measurements: Measurements

Lesson 1	To convert common measurements into centimetres and millimetres.
Lesson 2	To convert units of measure into different units; to use knowledge of decimals and fractions to help convert units.
Lesson 3	To convert metres into kilometres as units of measure.
Lesson 4	To convert distances between miles and kilometres.
Lesson 5	To convert units of mass from grams to kilograms using decimals and fractions.
Lesson 6	To convert units of volume from millilitres to litres.
Lesson 7	To convert units of time from minutes to hours; to represent time using 24-hour notation.
Chapter consolidation	To practise various concepts covered in the chapter.

Number and Place Value: Negative numbers

Lesson 1	To add and subtract numbers using a number line
Lesson 2	To create number stories using negative numbers
Chapter consolidation	To practise various concepts covered in the chapter.
2 consolidation	To be used if lessons take longer than expected or a topic needs to be revisited.

Fractions, Decimals and Percentages: Percentages

Lesson 1	To find the percentage of a whole number using division and multiplication; to use bar modelling as a pictorial approach to calculating percentage.
Lesson 2	To find the percentage of a quantity; to use bar model diagrams to support the division and multiplication of numbers towards the percentage.
Lesson 3	To find the percentage change in an amount over time; to calculate the percentage change where the number gives rise to a decimal.
Lesson 4	To use percentage, bar models and fractions to compare amounts.
Chapter consolidation	To practise various concepts covered in the chapter.

Ratio and Proportion

Lesson 1	To use ratios and fractions to compare objects; to find the relationship between ratios, percentages and fractions.
Lesson 2	To determine the ratio of a quantity using concrete materials; to simplify ratios using concrete materials in addition to division.
Lesson 3	To compare more than two quantities using the term 'ratio'; to use bar models to express ratios where there is more than one quantity.
Lesson 4	To compare quantity using both fractions and ratios; to use bar model diagrams to represent ratios.
Lesson 5	To compare quantities using bar models and common factors; to use multiplication and division to simplify ratios.
Lesson 6	To compare numbers using ratios; to make decisions about simplifying ratios using division.
Lesson 7	To solve word problems using a variety of heuristics including guess-and-check and bar models; to apply knowledge of ratios to word problems.
Lesson 8	To solve word problems using the bar model heuristic; to employ division and multiplication as primary strategies when solving word problems visually.
Lesson 9	To apply the guess-and-check and advanced bar model heuristic to ratio word problems.
Chapter consolidation	To practise various concepts covered in the chapter.

Algebra:

Lesson 1	To determine a pattern using concrete materials and pictorial representation; to use a table to identify a repeating pattern; to express a rule using a letter or symbol.
Lesson 2	To determine a pattern using concrete materials and pictorial representation; to use a table to identify a repeating pattern; to express the relationship between consecutive numbers in terms of a symbol or letter.
Lesson 3	To determine a pattern using concrete materials and pictorial representation; to use a table to identify a pattern; to express the relationship between consecutive numbers in terms of a symbol or letter.
Lesson 4	To determine a pattern using concrete materials and pictorial representation; to use a table to identify a pattern; to express unknown numbers in terms of a letter or symbol, including using a number before a letter for multiplication.
Lesson 5	To use a table to identify a pattern; to write algebraic expressions using each of the four operations.
Lesson 6	To use examples to identify rules; to write algebraic expressions using each of the four operations; to evaluate algebraic expressions including the use of inverse operations.
Lesson 7	To recognise patterns; to write algebraic expressions with two steps; to evaluate algebraic expressions with two steps.
Lesson 8	To recognise patterns; to write and evaluate algebraic expressions with two steps; to write and use formulae.
Lesson 9	To use formulae to solve problems; to replace a letter/variable with a number then solve the equation; to use inverse operations to solve equations.
Lesson 10	To solve equations; to use equations to find unknown values.
Chapter consolidation	To practise various concepts covered in the chapter.

Measurement: Area and Perimeter

Lesson 1	To find the area and perimeter of rectangles; to calculate perimeter using the known area and vice versa.
Lesson 2	To find and calculate the area of a parallelogram; to use concrete materials and prior understanding of area to construct a formula for the area.
Lesson 3	To use prior knowledge of area to determine and solve the area of a triangle; to use and apply the formula for the area of a rectangle to solve problems involving triangles.
Lesson 4	To calculate the area of a triangle using a formula; to calculate the area of a triangle in multiple ways.
Lesson 5	To use multiple methods to solve the area of a triangle.
Lesson 6	To find the area of a parallelogram using an understanding of triangles; to use concrete materials to find the area of a parallelogram.
Chapter consolidation (A & P)	To practise various concepts covered in the chapter.
3 consolidation days	To be used if lessons take longer than expected or a topic needs to be revisited.
Lesson 9	To find the volume of cubes and cuboids using concrete materials.
Lesson 10	To determine the formula for the volume of cubes and cuboids and apply it to calculate the volume of shapes.
Lesson 11	To estimate the volume of objects and spaces; to calculate the volume of boxes using the formula for volume of cubes and cuboids.
Lesson 12	To calculate the volume of boxes using the formula for volume of a cube; to expose common misconceptions in volume through a 3-box arrangement.
Lesson 13	To solve word problems involving the volume of cubes and cuboids; to apply the formula for the volume of a cube or cuboid.
Chapter consolidation (V)	To practise various concepts covered in the chapter.

Geometry: Properties and Shapes

Lesson 1	To investigate opposite angles; to use prior knowledge of angles to solve problems involving angles.
Lesson 2	To solve problems involving angles using the bar model heuristic; to solve problems involving angles without protractors.
Lesson 3	To determine and show the sum of the angles inside a triangle.
Lesson 4	To investigate and determine angles in quadrilaterals.
Lesson 5	To use the knowledge of angles inside a triangle and a quadrilateral to solve problems involving angles in other shapes.

Geometry: Position and Direction

Lesson 1	To represent negative numbers on both vertical and horizontal number lines.
Lesson 2	To describe the positions of objects on a coordinate grid; to use x and y axes to determine the position of objects on a grid.
Lesson 3	To describe the position of points using coordinates on a grid.
Lesson 4	To draw polygons on a coordinate grid; to recognise polygons on a coordinate grid.
Lesson 5	To describe the translation of shapes on a coordinate grid.

Statistics: Graphs and Averages

Lesson 1	To calculate the average (mean) of sets of values.
Lesson 2	To calculate the mean.
Lesson 3	To calculate the mean.
Lesson 4	To solve problems involving the mean; to use the mean and the number of values to calculate the total; to use given
Lesson 5	information to find unknown values.
Lesson 6	To show information on graphs; to transfer information from a table to a pie chart.
Lesson 7	To read and interpret pie charts.
Lesson 8	To read and interpret pie charts; to use percentages in pie charts.
Lesson 9	To read and interpret pie charts; to use knowledge of angles to interpret pie charts.
Lesson 10	To read line graphs; to interpret the information in line graphs that show distance and time.

Geometry: Properties and Shapes

Lesson 6	To name the parts of a circle; to calculate diameter and radius using parts of a circle.
Lesson 7	To solve problems involving angles in a circle.
Lesson 8	To draw quadrilaterals with specific side lengths and parallel lines; to find the perimeter of shapes and name trapeziums
Lesson 9	and parallelograms.
Lesson 10	To draw triangles using measurements and angles as the starting point; to use a protractor to draw triangles using angles.
Lesson 11	To construct triangles using a protractor and ruler; to use ratio to determine the dimensions of a triangle.
Lesson 12	To construct the nets of 3-D shapes by identifying the faces and the 2-D shapes that construct them.
Chapter consolidation	To practise various concepts covered in the chapter.

Geometry: Position and Direction

Lesson 6	To describe reflection using a mirror line and the terms 'object' and 'image'.
Lesson 7	To reposition objects so they can be reflected in the x and y axis as the mirror line.
Lesson 8	To describe the movement of objects using the terms 'translation' and 'reflection'.
Lesson 9	To use algebra to describe the positions of coordinates in relationship to one another.
Lesson 10	To represent translation and reflection using algebraic notation.
Chapter consolidation	To practise various concepts covered in the chapter.

Statistics: Graphs and Averages

Lesson 11	To convert miles into kilometres and kilometres into miles
Lesson 12	To read and interpret line graphs
Chapter consolidation	To practise various concepts covered in the chapter.