PRIMARY MATHS YEAR 6

	AUTUMN TERM	SPRING TERM	SUMMER TERM
Week 1	Number and Place Value: Numbers to 10 Million LESSON BREAKDOWN	Measurement: Measurements LESSON BREAKDOWN	Statistics: Graphs and Averages LESSON BREAKDOWN
Week 2	Calculations: Four Operations on Whole Numbers LESSON BREAKDOWN	Word Problems LESSON BREAKDOWN	
Week 3		Mid-year (A) Tests and Remediation	Number and Place Value: Negative Numbers LESSON BREAKDOWN
Week 4		Fractions, Decimals and Percentages: Percentage LESSON BREAKDOWN	SATs
Week 5		Ratio and Proportion: Ratio LESSON BREAKDOWN	Measurement: Volume LESSON BREAKDOWN
Week 6	Fractions, Decimals and Percentages: Fractions LESSON BREAKDOWN		Geometry – Properties and Shapes: Geometry LESSON BREAKDOWN
Week 7		Algebra: Algebra LESSON BREAKDOWN	
Week 8			Geometry – Position and Direction: Position and Movement LESSON BREAKDOWN
Week 9	Fractions, Decimals and Percentages: Decimals LESSON BREAKDOWN	Measurement: Area and Perimeter LESSON BREAKDOWN	Statistics: Graphs and Averages LESSON BREAKDOWN
Week 10			Revisit Topics
Week 11		Geometry – Properties and Shapes: Geometry LESSON BREAKDOWN	Revision and End-of-year (B) Tests
Week 12	Measurement: Measurements LESSON BREAKDOWN	Geometry – Position and Direction: Position and Movement LESSON BREAKDOWN	Revisit Topics

AUTUMN TERM – TEXTBOOK 6A		
Number and Place Value: Numbers to 10 Million		
Maths — No Problem! Book Reference	**Lesson Name**	**Lesson Objective**
– Numbers to 10 Million	Lesson 1 – Reading and Writing Numbers to 10 Million	To create and identify numbers to 10 000 000 ; to write in numerals and words numbers to 10 000 000.
	Lesson 2 – Reading and Writing Numbers to 10 Million	To construct and record numbers to 10 000 000; to recognise the value of digits to 10 000 000.
	Lesson 3 – Reading and Writing Numbers to 10 Million	To recognise and construct numbers to 10 000 000 using an abacus; to recognise the value of digits in numbers to 10 000 000 and write numbers using numerals and words.
	Lesson 4 – Comparing Numbers to 10 Million	To compare numbers to 10 000 000 using place value.
	Lesson 5 – Comparing and Ordering Numbers to 10 Million	To compare and order numbers to 10 000 000; to create combinations of numbers using a fixed number of digits.
	Lesson 6 – Rounding Numbers	To round numbers to 10 000 000 to the nearest million, hundred thousand and ten thousand.
	Lesson 7 – Rounding Numbers	To round numbers to the nearest appropriate number up to and including millions; to determine when rounding is appropriate and to which value.
	Chapter consolidation	To practise various concepts covered in the chapter.

– Four Operations on Whole Numbers	Lesson 1 – Using Mixed Operations	To use multiple operations and create expressions from a picture; to use the order of operations to solve expressions.
	Lesson 2 – Using Mixed Operations	To create and solve expressions using the four operations.
	Lesson 3 – Multiplying by 2-Digit Numbers	To multiply numbers by multiples of 10; to use number bonds as a key strategy in multiplication.
	Lesson 4 – Multiplying by 2-Digit Numbers	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 – Multiplying by 2-Digit Numbers	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 – Multiplying by 2-Digit Numbers	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 – Multiplying by 2-Digit Numbers	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 – Estimating Products of Large Numbers	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 – Dividing by 2-Digit Numbers	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 – Dividing by 2-Digit Numbers	To divide 4-digit numbers by 2-digit numbers; to use number bonds and long division as the key strategies.
	Lesson 11 – Dividing by 2-Digit Numbers	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 – Dividing by 2-Digit Numbers	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 – Dividing by 2-Digit Numbers	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.

– Four Operations on Whole Numbers	Lesson 14 – Solving Word Problems	To use the bar model heuristic to solve word problems involving multiplication and division.
	Lesson 15 – Solving Word Problems	To solve word problems using division as the main strategy; to use pictorial representations to support word problems.
	Lesson 16 – Solving Word Problems	To solve word problems involving multiple operations, including multiplication and division.
	Lesson 17 – Finding Common Multiples	To find common multiples in real-life situations; to use common multiples in tandem with knowledge of time.
	Lesson 18 – Finding Common Multiples	To use common multiples to solve problems; to organise mathematical thinking into tables and lists.
	Lesson 19 – Finding Common Factors	To find the largest common factor of 3-digit numbers; to use multiplication and division to find largest common factors.
	Lesson 20 – Finding Common Factors	To find common factors using concrete materials.
	Lesson 21 – Finding Prime Numbers	To use prime numbers to create other numbers; to explore prime numbers above 100.
	Lesson 22 – Finding Prime Numbers	To explore prime numbers using concrete materials; to identify prime numbers using multiplication or division.
	Chapter consolidation	To practise various concepts covered in the chapter.

– Fractions	Lesson 1 – Simplifying Fractions	To use concrete materials to simplify fractions; to recognise equivalence in fractions to $^1/_4$.
	Lesson 2 – Simplifying Fractions	To simplify fractions using division and common factors; to represent fractions using concrete materials and pictorial representations.
	Lesson 3 – Comparing and Ordering Fractions	To compare fractions and place them in order from smallest to largest.
	Lesson 4 – Comparing and Ordering Fractions	To compare and order fractions by finding common denominators.
	Lesson 5 – Comparing and Ordering Fractions	To compare and order fractions using common factors.
	Lesson 6 – Adding and Subtracting Fractions	Adding and subtracting fractions with different denominators; using pictorial representations to compare fractions and add/subtract.
	Lesson 7 – Adding and Subtracting Fractions	To add and subtract fractions of different denominators; to develop questions and word problems based on the information provided.
	Lesson 8 – Adding and Subtracting Fractions	To add and subtract fractions with different denominators.
	Lesson 9 – Adding and Subtracting Fractions	To add and subtract mixed numbers, including fractions with different denominators; to subtract from the whole and add the remainder back on.
	Lesson 10 – Adding and Subtracting Fractions	To add and subtract fractions with different denominators; to add and subtract mixed numbers.
	Lesson 11 – Multiplying Fractions	To multiply fractions using pictorial representations and abstract methods.
	Lesson 12 – Multiplying Fractions	To determine if the commutative law applies to fractions; to multiply fractions using concrete materials and pictorial representations.
	Lesson 13 – Multiplying Fractions	To use concrete materials to understand and solve the multiplication of fractions; to simplify equations using pattern blocks.
	Lesson 14 – Dividing a Fraction by a Whole Number	To divide a fraction by a whole number; to use pictorial representation to divide whole numbers into fractions.
	Lesson 15 – Dividing a Fraction by a Whole Number	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 16 – Dividing a Fraction by a Whole Number	To divide fractions by a whole number; to use pictorial representations to support division.
	Chapter consolidation	To practise various concepts covered in the chapter.

– Decimals	Lesson 1 – Writing and Reading Decimals	To read and write decimals to thousandths; to use concrete materials to represent decimals.
	Lesson 2 – Dividing Whole Numbers	To divide whole numbers by larger whole numbers; to use Base 10 materials to represent tenths, hundredths and thousandths.
	Lesson 3 – Dividing Whole Numbers	To divide whole numbers that give rise to decimals; to calculate decimal fraction equivalents using long division.
	Lesson 4 – Writing Fractions as Decimals	To convert fractions into decimals using bar models and long division.
	Lesson 5 – Writing Fractions as Decimals	To write fractions as decimals; to use long division as the key strategy for turning fractions into decimals.
	Lesson 6 – Multiplying Decimals	To multiply decimals by whole numbers using partitioning or the worded method to help find the solution.
	Lesson 7 – Multiplying Decimals	To multiply whole numbers that include a decimal by other whole numbers; to use partitioning and the worded method as key strategies.
	Lesson 8 – Multiplying Decimals	To multiply decimals by whole numbers, including regrouping and renaming.
	Lesson 9 – Multiplying Decimals	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 – Dividing Decimals	To divide decimals using number bonds and number discs as the key strategies.
	Lesson 11 – Dividing Decimals	To divide decimals using bar models, number bonds and long division as key strategies, including regrouping and renaming.
	Lesson 12 – Multiplying a Decimal by a 2-Digit Whole Number	To multiply decimals by a 2-digit whole number using number discs and the column method.
	Lesson 13 – Dividing a Decimal by a 2-Digit Whole Number	To divide decimals by 2-digit numbers using number bonds and the worded method.
	Lesson 14 – Dividing a Decimal by a 2-Digit Whole Number	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	Lesson 1 – Converting Units of Length	To convert common measurements into metres, centimetres and millimetres.
	Lesson 2 – Converting Units of Length	To convert units of measure into different units; to use knowledge of decimals and fractions to help convert units.
	Lesson 3 – Converting Units of Length	To convert metres into kilometres as units of measure.
	Lesson 4 – Converting Units of Mass	To convert units of mass from grams to kilograms using decimals and fractions.
	Lesson 5 – Converting Units of Volume	To convert units of volume from millilitres to litres.

SPRING TERM –		
Measurement: Measurements (continued from Autumn term)		
Maths — No Problem! Book Reference	**Lesson Name**	**Lesson Objective**
– Measurements	2 revision days	To revisit lessons 1–5.
	Lesson 6 – Converting Units of Time	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.
	1 consolidation day	To be used if lessons take longer than expected or a topic needs to be revisited.
– Word Problems	Lesson 1 – Solving Word Problems	To use bar models to solve word problems involving the four operations.
	Lesson 2 – Solving Word Problems	To use the bar model heuristic to solve word problems involving the four operations.
	Lesson 3 – Solving Word Problems	To use the bar model heuristic to solve complex word problems involving time.
	Lesson 4 – Solving Word Problems	To solve complex word problems using pictorial representation and the four operations.
	Lesson 5 – Solving Word Problems	To create and solve word problems that apply the bar model heuristic and working backwards as the main strategies.
	Lesson 6 – Solving Word Problems	To create and solve complex word problems using the four operations.
	Chapter consolidation	To practise various concepts covered in the chapter.
– Percentage	Lesson 1 – Finding the Percentage of a Number	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 – Finding the Percentage of a Quantity	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 – Finding Percentage Change	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 – Using Percentage to Compare	To use percentage, bar models and fractions to compare amounts.
	Chapter consolidation	To practise various concepts covered in the chapter.

– Ratio	Lesson 1 – Comparing Quantities	To use ratios and fractions to compare objects; to find the relationship between ratios, percentages and fractions.
	Lesson 2 – Comparing Quantities	To determine the ratio of a quantity using concrete materials; to simplify ratios using concrete materials in addition to division.
	Lesson 3 – Comparing Quantities	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 – Comparing Quantities	To compare quantity using both fractions and ratios; to use bar model diagrams to represent ratios.
	Lesson 5 – Comparing Quantities	To compare quantities using bar models and common factors; to use multiplication and division to simplify ratios.
	Lesson 6 – Comparing Numbers	To compare numbers using ratios; to make decisions about simplifying ratios using division.
	Lesson 7 – Solving Word Problems	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 – Solving Word Problems	To solve word problems using the bar model heuristic; to employ division and multiplication as primary strategies when solving word problems visually.
	Lesson 9 – Solving Word Problems	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 – Describing a Pattern	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 – Describing a Pattern	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 – Describing a Pattern	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 – Describing a Pattern	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 – Writing Algebraic Expressions	To use a table to identify a pattern; to write algebraic expressions using each of the four operations.
	Lesson 6 – Writing and Evaluating Algebraic Expressions	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 – Writing and Evaluating Algebraic Expressions	To recognise patterns; to write algebraic expressions with two steps; to evaluate algebraic expressions with two steps.
	Lesson 8 – Writing Formulae	To recognise patterns; to write and evaluate algebraic expressions with two steps; to write and use formulae.
	Lesson 9 – Using Formulae	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 – Solving Equations	To solve equations; to use equations to find unknown values.
	Chapter consolidation	To practise various concepts covered in the chapter.

– Area and Perimeter **Lessons 1–6**	Lesson 1 – Finding the Area and the Perimeter of Rectangles	To find the area and perimeter of rectangles; to calculate perimeter using the known area and vice versa.
	Lesson 2 – Finding the Area of Parallelograms	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 – Finding the Area of Triangles	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 – Finding the Area of Triangles	To calculate the area of a triangle using a formula; to calculate the area of a triangle in multiple ways.
	Lesson 5 – Finding the Area of Triangles	To use multiple methods to solve the area of a triangle.
	Lesson 6 – Finding the Area of Parallelograms	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	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.

SUMMER TERM –		
Measurement: Volume		
Maths — No Problem! Book Reference	**Lesson Name**	**Lesson Objective**
– Volume	Lesson 1 – Finding the Volume of Cubes and Cuboids	To find the volume of cubes and cuboids using concrete materials.
	Lesson 2 – Finding the Volume of Cubes and Cuboids	To determine the formula for the volume of cubes and cuboids and apply it to calculate the volume of shapes.
	Lesson 3 – Finding the Volume of Cubes and Cuboids	To estimate the volume of objects and spaces; to calculate the volume of boxes using the formula for volume of cubes and cuboids.
	Lesson 4 – Finding the Volume of Cubes and Cuboids	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 5 – Solving Problems Involving the Volume of Solids	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	To practise various concepts covered in the chapter.

– Geometry Lessons 6–12	Lesson 6 – Naming Parts of a Circle	To name the parts of a circle; to calculate diameter and radius using parts of a circle.
	Lesson 7 – Solving Problems Involving Angles in a Circle	To solve problems involving angles in a circle.
	Lesson 8 – Drawing Quadrilaterals	To draw quadrilaterals with specific side lengths and parallel lines; to find the perimeter of shapes and name trapeziums and parallelograms.
	Lesson 9 – Drawing Triangles	To draw triangles using measurements and angles as the starting point; to use a protractor to draw triangles using angles.
	Lesson 10 – Drawing Triangles	To construct triangles using a protractor and ruler; to use ratio to determine the dimensions of a triangle.
	Lesson 11 – Drawing Nets of Three-Dimensional Shapes	To construct the nets of 3-D shapes by identifying the faces and the 2-D shapes that construct them.
	Lesson 12 – Drawing Nets of Three-Dimensional Shapes	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.
	2 consolidation days	To be used if lessons take longer than expected or a topic needs to be revisited.
– Position and Movement Lessons 6–10	Lesson 6 – Describing Reflections	To describe reflection using a mirror line and the terms 'object' and 'image'.
	Lesson 7 – Describing Movements	To reposition objects so they can be reflected in the x and y axis as the mirror line.
	Lesson 8 – Describing Movements	To describe the movement of objects using the terms 'translation' and 'reflection'.
	Lesson 9 – Using Algebra to Describe Position	To use algebra to describe the positions of coordinates in relationship to one another.
	Lesson 10 – Using Algebra to Describe Movements	To represent translation and reflection using algebraic notation.
	Chapter consolidation	To practise various concepts covered in the chapter.
– Graphs and Averages Lessons 11–12	Lesson 11 – Converting Miles into Kilometres	To convert miles into kilometres and kilometres into miles.
	Lesson 12 – Reading Line Graphs	To read and interpret line graphs.
	Chapter consolidation	To practice various concepts covered in the chapter.
	2 consolidation days	To be used if lessons take longer than expected or a topic needs to be revisited.