

## Year 6 End of Unit Milestones

### Spring Term – TEXTBOOK 6B

#### Chapter 8 Ratio and Proportion: Ratio

##### By the end of this unit, children will be able to:

- use ratios and fractions to compare objects
- find the relationship between ratios, percentages and fractions
- determine the ratio of a quantity using concrete materials
- simplify ratios using concrete materials in addition to division
- compare more than two quantities using the term 'ratio'
- use bar models to express ratios where there is more than one quantity
- compare quantity using both fractions and ratios
- compare quantities using bar models and common factors
- use multiplication and division to simplify ratios
- compare numbers using ratios and make decisions about simplifying ratios using division

### Spring Term – TEXTBOOK 6B

#### Chapter 9 Algebra

##### By the end of this unit, children will be able to:

- determine a pattern using concrete materials and pictorial representation and use a table to identify a repeating pattern
- express a rule using a letter or symbol
- express the relationship between consecutive numbers in terms of a symbol or letter, including using a number before a letter for multiplication.
- write algebraic expressions using each of the four operations.
- evaluate algebraic expressions including the use of inverse operations
- write and evaluate algebraic expressions with two steps
- to write and use formulae to solve problems
- replace a letter/variable with a number then solve the equation
- use the inverse operation to solve problems and use equations to find unknown values.

### Spring Term – TEXTBOOK 6B

#### Chapter 10 Measurement: Area and Perimeter

##### By the end of this unit, children will be able to:

- find the area and perimeter of rectangles
- calculate perimeter using the known area and vice versa
- find and calculate the area of a parallelogram
- use concrete materials and prior understanding of area to construct a formula for the area
- use prior knowledge of area to determine and solve the area of a triangle
- use and apply the formula for the area of a rectangle to solve problems involving triangles
- calculate the area of a triangle using a formula

- find the area of a parallelogram using an understanding of triangles
- use concrete materials to find the area of a parallelogram.

## Spring Term – TEXTBOOK 6B

### Chapter 11 Measurement: Volume

#### By the end of this unit, children will be able to:

- find the volume of cubes and cuboids using concrete materials
- determine the formula for the volume of cubes and cuboids and apply it to calculate the volume of shapes
- estimate the volume of objects and spaces
- calculate the volume of boxes using the formula for volume of cubes and cuboids
- apply the formula for the volume of a cube or cuboid.

## Spring Term – TEXTBOOK 6B

### Chapter 12 Properties and Shapes: Geometry

#### By the end of this unit, children will be able to:

- solve problems involving angles(including opposite angles)
- solve problems involving angles without protractors
- determine and show the sum of the angles inside a triangle and in quadrilaterals
- use the knowledge of angles inside a triangle and a quadrilateral to solve problems involving angles in other shapes
- name the parts of a circle
- calculate diameter and radius using parts of a circle
- construct the nets of 3-D shapes by identifying the faces and the 2-D shapes that construct them .

## Spring Term – TEXTBOOK 6B

### Chapter 13 Geometry: Position and Movement

#### By the end of this unit, children will be able to:

- represent negative numbers on both vertical and horizontal number lines
- describe the positions of objects on a coordinate grid; to use x and y axes to determine the position of objects on a grid
- describe the position of points using coordinates on a grid
- recognise and draw polygons on a coordinate grid
- describe the translation of shapes on a coordinate grid
- translate and reflect shapes on a coordinate grid
- reposition objects so they can be reflected in the x and y axis as the mirror line.

**By the end of this unit, children will be able to:**

- calculate the average (mean) of sets of values
- solve problems involving the mean
- use the mean and the number of values to calculate the total
- show information on graphs
- transfer information from a table to a pie chart
- read and interpret pie charts
- use percentages in pie charts.
- use knowledge of angles to interpret pie charts
- interpret the information in line graphs that show distance and time.
- read and interpret line graphs
- answer questions about the information in line graphs.