Year 6

Number: Place Value

- Numbers to ten million
- Compare and order any number
- Round any whole number
- Use negative numbers in context and calculate intervals across zero

Decimals and Percentages

Decimals:

- Three decimal places
- Multiply and divide by 10, 100 and 1,000
- Multiply and divide decimals by integers
- Use written division methods to solve problems, where the answer has two decimal places
- Decimals as fractions
- Fractions to decimals

Percentages:

- Fractions to percentages
- Equivalent fractions, decimals, percentages
- Order fractions, decimals, percentages
- Percentage of an amount
- Percentages – missing values

Geometry: Position and Direction

- The first quadrant
- Four quadrants
- Draw and translate simple shapes on the co-ordinate plane and reflect them in the axes
- Reflections

Algebra

- Find a rule – one step/two step
- Forming expressions
- Substitution
- Formulae and forming equations
- Solve simple one-step/two-step equations
- Find pairs of values
- Enumerate possibilities

Fractions

- Simplify fractions
- Fractions on a number line
- Compare and order denominator/numerator
- Add and subtract fractions
- Mixed addition and subtraction
- Multiply and divide fractions by integers
- Multiply fractions by fractions
- Four rules with fractions
- Fraction of an amount
- Fraction of an amount – find the whole
- Solve problems which require answers to be rounded to a specified degree of accuracy

Statistics

- Read, interpret and draw line graphs
- Use line graphs and pie charts to solve problems
- Circles
- Read, interpret and draw pie charts
- Pie charts with percentages
- Calculate and interpret the mean as an average

Measurement: Converting Units

- Use, read, write and convert between standard units, converting measurements

Calculations: Four Operations

- Add and subtract integers
- Multiply up to a 4-digit number by a 2-digit number
- Divide numbers up to a 4-digit number by a 2-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why
- Use estimation to check answers to calculations and determine, in the context of the problem, an appropriate degreee of accuracy
- Long division
- Division using factors
- Common factors and multiples
- Primes to 100
- Square and cubes
- Order of operations
- Mental calculations and estimation
- Reason from known facts

Properties of shape

- Compare and classify geometric shapes based on their properties and sizes and finds unknown angles in any triangles, quadrilaterals and regular polygons
- Measure with a protractor
- Introduce and calculate angles
- Vertically opposite angles
- Angles in a triangle, special quadrilaterals, regular polygons
- Draw shapes accurately
- Draw nets of 3-D shapes

Ratio

	of length, mass, volume and time from a smaller unit of measure to a larger unit, using decimal notation up to three decimal places • Metric measures • Convert metric measures • Calculate with metric measures • Miles and kilometres • Imperial measures	• Using ratio language • Ratio and fractions • Introducing the ratio symbol • Calculating ratio • Using and calculating scale factors • Solve problems involving the calculation of percentages • Solves problems involving unequal sharing and grouping using knowledge of fractions and multiples • Ratio and proportion problems **Area, Perimeter and Volume** • Shapes – same area • Area and perimeter • Area of a triangle and a parallelogram • Volume – counting cubes • Volume of a cuboid