Aims

The national curriculum for mathematics aims to ensure that all pupils:

• become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately

• reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language

• can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions

Garden Suburb Junior School Year 5 Mathematics Overview Autumn Term 2018

Autumn 1	
Number - Number and place value	• Identify the value of each digit in a five-digit number • Use the value of the digits to compare and order numbers • Count on and back in tens and hundreds • Round numbers up to 100 000 to the nearest 10, 100 and 1000
Number - Addition and subtraction	• Add mentally two- or three-digit multiples of 10 to a four-digit number • Add mentally multiples of 10 to a five-digit number • Subtract mentally two- or three-digit multiples of 10 to a four-digit number • Subtract mentally multiples of 10 to a five-digit number • Subtract mentally near multiples of 10 000 from a five-digit number
Number - Addition and subtraction	• Add whole numbers mentally using the number line or jottings if necessary • Add whole numbers with five digits using the formal written method • Estimate and use rounding to check answers to a calculation
Number - Multiplication and division	•Multiply by 10/100 an adjust to find the answer when multiplying by 9/99 • Recall all the multiplication facts for all tables up to 10x10 and multiply all by 10, 100 or 1000 • Mentally multiply TO x O and then multiply by 10, 100 or 1000 • Multiply a two-digit number by a multiple of 10 • Multiply by 5/50 using multiplication by 10/100 and halving • Multiply by 25 using multiplication by 100, halving and halving again
Number - Multiplication and division	• Identify whether a number up to 100 is prime or composite and explain their reasoning • Recall the division facts for all multiplication tables up to 12x12 and associated facts involving multiples of 10, 100, 1000 • Make a reasonable estimate for the answer to a calculation
Number - Multiplication and division	• Use knowledge of multiplication tables to recall square and cube numbers • Recall all the multiplication facts for all tables up to 10x10 and multiply all by 10, 100 or 1000 • Find the common factors of two numbers • Identify multiples of all numbers up to 12x12 • Recognise when to use mental strategies to work out calculations

Garden Suburb Junior School Year 5 Mathematics Overview Autumn Term 2018

Autumn 2	
Number - Number and place value	• Identify the value of each digit in a six-digit number • Use the value of the digits to compare and order numbers • Count on and back in tens, hundreds and thousands, knowing which digit to focus on • Round numbers to 1 000 000 to the nearest 10, 100 and 1000 • Interpret negative numbers in context • Count forwards and backwards with positive and negative whole numbers, including through zero
Number – Fractions	• Divide a whole number by the denominator and multiply the answer by the numerator • Count forwards or backwards in simple fractions • Recognise, describe and continue number sequences involving fractions • Write families of equivalent fractions • Compare and order fractions
Number – Fractions	• Identify thousandths and relate them to tenths and hundredths • Compare and order fractions by converting them to the lowest common denominator • Add and subtract fractions
Number – Decimals	• Know the place value of decimal numbers with two decimal places • Know that decimals with one decimal place are tenths and decimals with two decimal places are hundredths • Round decimals with two decimal places to the nearest whole number and to one decimal place • Add decimals, including complements of 1 • Recognise, describe and continue number sequences involving decimals
Measurement – (Mass)	• Convert between grams and kilograms using knowledge of place value, multiplication and division • Use the equivalence of 1 kg – 2.2 lb to convert metric units to imperial units and vice versa • Use all four operations, decimal notation and scaling to solve problems involving mass
Measurement (time)	• Covert between analogue and digital 24-hour clocks to solve problems • Solve problems involving durations of time • Use all four operations to solve problems involving time, including scaling
Geometry - Properties of shape	• Identify 3-D shapes with parallel or perpendicular faces or edges • Identify properties such as the number of faces, edges and vertices in 3-D shapes from 2-D representations • Use 2-D views of a 3-D shape to construct 3-D shapes • Draw a 3-D shape as it would be seen form the top, from the front and from the side • Match a 3-D shape to a 2-D representation of the orientation of the shape