Year 5 Autumn Term
Unit 1 – numbers in real life
Read, write, order and compare numbers to at least 500 000 and determine the value of each digit.
Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.
Round any number up to 500 000 to the nearest 10, 100, 1000, 10 000 and 100 000.
Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.
Convert between different units of metric measure, e.g. kilometre and metre; centimetre and metre; centimetre and millimetre.
Solve problems involving converting between units of time.
Read and write decimal numbers as fractions, e.g. 0.71 = 71 100 .
Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.
Convert between different units of metric measure, e.g. grams and kilograms.
Round decimals with two decimal places to the nearest whole number and to one decimal place.
Read, write, order and compare numbers with up to three decimal places.
Solve problems involving numbers up to three decimal places.
Unit 2 – methods for addition and subtraction
Add and subtract numbers mentally with increasingly large numbers.
Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
Add and subtract whole numbers with four digits, including using written methods (columnar addition and subtraction).
Unit 3 – methods for multiplication and division
Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.
Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.
Multiply and divide numbers mentally drawing upon known facts.
Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.
Multiply numbers up to 4 digits long by a single or 2-digit number using a formal written method, including long multiplication for 2-digit numbers.
Divide numbers up to 4 digits long by a single digit number using the formal written method of short division and interpret remainders appropriately for the context.
Unit 4 – triangles and other polygons
Know angles are measured in degrees: estimate and compare acute and obtuse angles.
Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.
Use the properties of rectangles to deduce related facts and fi nd missing lengths and angles.
Draw given angles, and measure them in degrees (°).
Identify: angles at a point and 1 whole turn (total 360°) - angles at a point on a straight line and 1/2 a turn (total 180°) • other multiples of 90°
Unit 5 – different types of number
Read, write, order and compare numbers to at least 500 000 and determine the value of each digit.
Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.
Round any number up to 500 000 to the nearest 10, 100, 1000, 10 000 and 100 000.
Solve number problems and practical problems that involve all of the above.
Interpret negative numbers in context.

Count forwards and backwards with positive and negative whole numbers, including through zero.
Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.
Solve problems involving units of time.

Unit 6 – mental and written methods for addition and subtraction

Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction).
Add and subtract numbers mentally with increasingly large numbers.
Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
Solve problems involving number up to three decimal places
Use addition and subtraction to solve problems involving mass using decimal notation.
Solve comparison, sum and difference problems using information presented in a line graph and bar charts
Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
Complete, read and interpret information in tables, including timetables

Year 5 Spring Term

Unit 7 - Fractions, decimals and percentages

Compare and order fractions whose denominators are all multiples of the same number
Identify, name and write equivalent fractions of a given fraction, repeated visually
Recognise mixed numbers and improper fractions and convert from one form to the other
Write mathematical statements > 1 as a mixed number
Solve problems involving measures
Read and write decimal numbers as fractions e.g. 0.71 = 71/100
Recognise and use tenths, hundredths and decimal equivalents
Recognise the percent symbol (%) and understand that percent relates to 'number of parts per hundred', and write percentages as a fraction with a denominator 100 and as a decimal

Unit 8 – Special numbers, operators and scaling

Identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers
Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers
Recall prime numbers up to 19
Recognise and use square numbers and cube numbers, and the notation for squared and cube numbers
Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes
Solve problems that require knowing percentage and decimal equivalents of ½ ¼ 1/5 2/5 4/5 and those fractions with a denominator of a multiple of 10 or 25
Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates

Unit 9 – 2D and 3D shapes

Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed
Identify 3D shapes including cubes and cuboids from 2D representations
Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
Draw given angles and measure them in degrees
Distinguish between regular and irregular polygons based on reasoning about equal sides and angles
Identify: angles at a point and 1 whole turn (total 360)
Identify: angles at a point on a straight line and half a turn (180)

Unit 10 (a) Negative numbers and millions

Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit
Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000
Interpret negative numbers in the context of temperature
Count forwards and backwards with positive and negative whole numbers, including through zero
Round any number up to 1,000,000 to the nearest 10
Round any number up to 1,000,000 to the nearest 100
Round any number up to 1,000,000 to the nearest 1,000
Round any number up to 1,000,000 to the nearest 10,000
Round any number up to 1,000,000 to the nearest 100,000
Solve number and practical problems that involve all of the above

Year 5 Summer Term

Unit 10 – Negative numbers, fractions and decimals

Compare and order numbers whose denominators are all multiples of the same number
Recognise mixed numbers and improper fractions and covert from one for to the other and write mathematical statements > 1 as a mixed number
Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
Round decimals with two decimal places to the nearest whole number
Round decimals with two decimal places to the nearest tenth
Read, write, order and compare numbers with up to three decimal places
solve problems involving numbers with up to three decimal places

Unit 11 – Addition and subtraction using measurement

Add numbers mentally with increasingly large numbers
Subtract numbers mentally with increasingly large numbers
Add numbers with more than 4 digits using the formal written method of column addition
Subtract numbers with more than 4 digits using the formal written method of column subtraction
Solve addition and subtraction multi step problems in contexts deciding which operations to use and why
Convert between different units of metric measures
Use addition and subtraction to solve problems involving measurement using decimal notation
Solve problems involving units of time
Start to solve comparison, sum and difference problems involving information presented in a line graph
Start to solve problems involving units of time

Unit 12 – Exploring fractions, decimals and percentages

Recognise mixed numbers and improper fractions and convert from one to the other and write mathematical statements > 1 as a mixed number
Add and subtract fractions with the same denominators that are multiples of the same number
Multiply fractions by whole numbers
Multiply and divide whole numbers and those involving decimals by 10
Multiply and divide whole numbers and those involving decimals by 100
Multiply and divide whole numbers and those involving decimals by 1000
Read and write decimal numbers as fractions
Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
Recognise the per cent symbol (%) and understand that it relates to 'number of parts per hundred' and write percentages as a fraction with a denominator of 100 and as a decimal
Identify, name and write equivalent fractions of tenths and hundredths

Unit 13 – Factors, scaling and long multiplication and division

Identify multiples and factors, including finding all factor pairs of a number
Identify multiples and factors including common factors of two numbers
Solve problems involving multiplication and division including using their knowledge of factors and

multiples, squares and cubes.
Multiply and divide numbers mentally drawing upon known facts
Solve problems involving multiplication and division including scaling by simple fractions and problems involving simple ratio
Multiply numbers up to 4 digits by a single number using the formal written method including long multiplication
Multiply numbers up to 4 digits by a 2 digit number using the formal written method including long multiplication
Divide numbers up to four digits by a single-digit number using the formal written method of short division and interpret remainders appropriately for the context
Unit 14 – Perimeter, area and volume
Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
Use the properties of rectangles to deduce related facts and find missing lengths and angles
Calculate and compare the area of rectangles (including squares) including standard units, square centimetres and square meters
Estimate the area of irregular shapes
Estimate the volume of cuboids e.g. using 1cm cubes and capacity e.g. using water