Maths Long Term Plan   Year 5

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Number: Number and Place Value: - 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. - Solve number problems and practical problems that involve all of the above. Number: Addition and Subtraction: - Add and subtract numbers mentally with increasingly large numbers. - Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).	Number: Number and Place Value: - Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000. - Solve number problems and practical problems that involve all of the above. Number: Multiplication and Division: - 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 (nonprime) numbers. - Establish whether a number up to 100 is prime and recall prime numbers up to 19. - Solve problems involving multiplication and division including using their knowledge of factors and multiples.	Number: Number and Place Value: - Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. - Solve number problems and practical problems that involve all of the above. - Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. Number: Multiplication and Division: - Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3). - Solve problems involving multiplication and division including using their knowledge of squares and cubes.	Number: Addition and Subtraction: - Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)- Revisit. Number: Multiplication and Division: - Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Number: Decimals: - Read and write decimal numbers as fractions [for example, 0.71 = 71/100] - Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. - Read, write, order and compare numbers with up to three decimal places.	Number: Addition and Subtraction: - Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Number: Multiplication and Division: - Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. Number: Decimals: - Round decimals with two decimal places to the nearest whole number and to one decimal place - Solve problems involving number up to three decimal places.	Number: Addition and Subtraction: - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Number: Multiplication and Division: - Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

Number: Multiplication and Division:	Number: Fractions:	Number: Fractions:	Measurement: Metric and Imperial Units:	Measurement: Volume/ Capacity:	Number: Fractions (incl. decimals and percentages):
- Multiply and divide numbers mentally drawing upon known facts. - Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers. **Number Fractions:** - Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths - Compare and order fractions whose denominators are all multiples of the same number. **Measurement: Perimeter and Area:** - Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. - Calculate and compare the area of rectangles (including	- Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 and 1/5]. - Add and subtract fractions with the same denominator and denominators that are multiples of the same number. **Measurement: Money:** - Use all four operations to solve problems involving measure [for example, **money**] using decimal notation. **Statistics** - Solve comparison, sum and difference problems using information presented in a line graph.	- Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 and 1/5]- Revisit. - Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. **Measurement: Converting Units:** - Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). - Solve problems involving converting between units of time. **Geometry: Properties of Shape:** - Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	- Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. **Geometry: Position and Direction:** - 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.	- Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]. **Geometry: Properties of Shape:** - Use the properties of rectangles to deduce related facts and find missing lengths and angles - Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	- Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal - Solve problems which 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. **Measurement:** - Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. **Statistics** - Complete, read and interpret information in tables, including timetables.

squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes. **Geometry:** **Properties of Shape:** - Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.		- Draw given angles, and measure them in degrees (o) - Identify: ♣ angles at a point and one whole turn (total 360o) ♣ angles at a point on a straight line and 2 1 a turn (total 180o) ♣ other multiples of 90o			