Hilton Lane Primary School
Maths Year 5 Overview

Number – number and place value	Number-addition and subtraction	Number- multiplication and division
-Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 -Count forwards and backwards in decimal steps -Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit -Read, write, order and compare numbers with up to 3 decimal places -Identify the value of each digit to three decimal places -Identify represent and estimate numbers using the number line -Find 0.01, 0.1, 1, 10, 100, 100 and other powers of 10 more or less than a given number -Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 -Round decimals with two decimal places to the nearest whole number and to one decimal place -Multiply/divide whole numbers and decimals by 10, 100 and 1000 -Interpret negative numbers in context, count on and back with positive and negative whole numbers, including through zero -Describe and extend number sequences including those with multiplication/division steps and where the step size is a decimal -Read Roman numerals to 1000 (M); recognise years written as such -Solve number and practical problems that involve all of the above	-Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) -Select a mental strategy appropriate for the numbers involved in the calculation -Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place) -Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places) -Add and subtract numbers mentally with increasingly large numbers and decimals to two decimal places -Add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction) -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 -Solve addition and subtraction problems involving missing numbers	-Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) -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 -Establish whether a number up to 100 is prime and recall prime numbers up to 19 -Recognise and use square (2) and cube (3) numbers, and notation -Use partitioning to double or halve any number, including decimals to two decimal places -Multiply and divide numbers mentally drawing upon known facts -Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes -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 -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 -Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy -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- fractions, decimals and percentages	**Geometry- Properties of shapes**	**Measurement**
-Recognise mixed numbers and improper fractions and convert from one form to the other -Read and write decimal numbers as fractions (e.g. 0.71 = $\frac{71}{100}$) -Count on and back in mixed number steps such as 1 ½ -Compare and order fractions whose denominators are all multiples of the same number (including on a number line) -Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	-Distinguish between regular and irregular polygons based on reasoning about equal sides and angles -Use the properties of rectangles to deduce related facts and find missing lengths and angles -Identify 3-D shapes from 2-D representations -Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles -Draw given angles, and measure them in degrees (°)	-Use, read and write standard units of length and mass -Estimate (and calculate) volume (e.g., using 1 cm^3 blocks to build cuboids (including cubes) and capacity (e.g. using water) -Understand the difference between liquid volume and solid volume -Continue to order temperatures including those below 0°C -Convert between different units of metric measure

-Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents -Add and subtract fractions with denominators that are the same and that are multiples of the same number (using diagrams) -Write statements > 1 as a mixed number (e.g. $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$) -Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams -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 involving fractions and decimals to three places -Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{4}\frac{1}{2}\frac{1}{5}\frac{2}{5}\frac{4}{5}$and fractions with a denominator of a multiple of 10 or 25	-Identify: angles at a point and one whole turn (total 360°) - angles at a point on a straight line and half a turn (total 180°) - other multiples of 90°	-Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints -Measure/calculate the perimeter of composite rectilinear shapes -Calculate and compare the area of rectangle, use standard units square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes -Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks -Solve problems involving converting between units of time -Use all four operations to solve problems involving measure using decimal notation, including scaling
Statistics	Geometry-position and direction	
-Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes) -Complete, read and interpret information in tables and timetables -Solve comparison, sum and difference problems using information presented in all types of graph including a line graph -Calculate and interpret the mode, median and range	-Describe positions on the first quadrant of a coordinate grid -Plot specified points and complete 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	