

Year 5	Number and place value	Addition and subtraction	Multiplication and division	Fractions	Measurement	Geometry	
						Properties of shape	Position and direction
Fluency Reasoning Problem solving		<p>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p> <p>Statistics</p> <ul style="list-style-type: none"> • solve comparison, sum and difference problems using information presented in a line graph 	<ul style="list-style-type: none"> • Solve problems involving addition, subtraction, multiplication and division including using their knowledge of factors and multiples, squares and cubes ▪ 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. 	<ul style="list-style-type: none"> ▪ solve problems involving number up to three decimal places • solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25. 	<ul style="list-style-type: none"> • solve problems involving converting between units of time ▪ use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling. <p>Statistics</p> <ul style="list-style-type: none"> • solve comparison, sum and difference problems using information presented in a line graph 		
Phase 1	<ul style="list-style-type: none"> • read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • 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 	<ul style="list-style-type: none"> • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy <p>Statistics</p> <ul style="list-style-type: none"> • Statistics: complete, read and interpret information in tables, including timetables. 	<ul style="list-style-type: none"> • 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 • multiply and divide numbers mentally drawing upon known facts • multiply and divide whole numbers and those involving decimals by 10, 100 • solve problems involving addition, subtraction, multiplication and division 	<ul style="list-style-type: none"> • compare and order fractions whose denominators are all multiples of the same number • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$) • add and subtract fractions with the same denominator round decimals 	<ul style="list-style-type: none"> • convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of rectangle (including squares) and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes • solve problems involving converting between units of time <p>Statistics</p> <ul style="list-style-type: none"> • Statistics: complete, read and interpret information in tables, including timetables. 	<ul style="list-style-type: none"> • identify 3-D shapes, including cubes and other cuboids, from 2-D representations • know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • identify: angles at a point and one whole turn (total 360°) 	
Phase 2	<ul style="list-style-type: none"> • count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 ▪ interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero 	<ul style="list-style-type: none"> • add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) ▪ add and subtract numbers mentally with increasingly large numbers • solve problems involving addition, subtraction, <p>Statistics</p> <ul style="list-style-type: none"> • statistics: solve comparison, sum and difference problems using information presented in a line graph 	<ul style="list-style-type: none"> • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • multiply numbers up to 4 digits by a one- or two-digit number using • recognise and use square numbers, and the notation for squared (²) • multiplication and division and a combination of these, including understanding the meaning of the equals sign 	<ul style="list-style-type: none"> • identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • add and subtract fractions with the same denominator and multiples of the same number • read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$) • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • round decimals with two decimal places to the nearest whole number and to one decimal place • 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 hundred, and as a decimal fraction • solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ 	<ul style="list-style-type: none"> ▪ use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling. 	<ul style="list-style-type: none"> • draw given angles, and measure them in degrees (°) • angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) • other multiples of 90° 	
Phase 3	<ul style="list-style-type: none"> • read Roman numerals to 1000 (M) and recognise years written in Roman numerals. 	<ul style="list-style-type: none"> • solve addition and subtraction multi- step problems in contexts, deciding which operations and methods to use and why. 	<ul style="list-style-type: none"> • establish whether a number up to 100 is prime and recall prime numbers up to 19 • 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 • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) 	<ul style="list-style-type: none"> • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • read, write, order and compare numbers with up to three decimal places ▪ solve problems involving number up to three decimal places • solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25. 	<ul style="list-style-type: none"> • understand and use equivalences between metric units and common imperial units such as inches, pounds and pints • estimate volume (e.g. using 1 cm³ blocks to build cubes and cuboids) and capacity (e.g. using water) 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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.

