

Chandag Infants School Mathematics Scheme of Work



	Year 1	Year 2	Year 3
Number - number and place value	<p>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</p> <p>Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s</p> <p>Given a number, identify 1 more and 1 less</p> <p>Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least</p> <p>Read and write numbers from 1 to 20 in numerals and words</p> <p>Begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations.</p> <p>Recognise and create repeating patterns with objects and with shapes.</p> <p>Begin to recognise odd and even numbers.</p>	<p>Count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward</p> <p>Recognise the place value of each digit in a two-digit number (10s, 1s)</p> <p>Identify, represent and estimate numbers using different representations, including the number line</p> <p>Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs</p> <p>Read and write numbers to at least 100 in numerals and in words</p> <p>Use place value and number facts to solve problems</p> <p>Partition numbers in different ways (EG. $23 = 20 + 3$ and $23 = 10 + 13$) to support subtraction.</p> <p>Begin to understand 0 as a place holder EG. 204</p>	<p>Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</p> <p>Recognise the place value of each digit in a 3-digit number (100s, 10s, 1s)</p> <p>Compare and order numbers up to 1,000</p> <p>Identify, represent and estimate numbers using different representations e.g. measures.</p> <p>Read and write numbers up to 1,000 in numerals and in words</p> <p>Solve number problems and practical problems involving these ideas</p>
Number - addition and subtraction	<p>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</p> <p>Represent and use number bonds and</p>	<p>Solve problems with addition and subtraction using concrete objects, pictorial representations, mental and written methods.</p>	<p>Add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> • a three-digit number and 1s • a three-digit number and 10s

	<p>related subtraction facts within 20</p> <p>Add and subtract one-digit and two-digit numbers to 20, including 0</p> <p>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$</p> <p>Discuss and solve problems in familiar practical contexts, including using quantities. Problems include the terms: put together, add, altogether, total, take away, distance between, difference between, more than and less than.</p>	<p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <ul style="list-style-type: none"> • a two-digit number and 1s • a two-digit number and 10s • 2 two-digit numbers • adding 3 one-digit numbers • show that addition of 2 numbers can be done in any order • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems <p>Extend language of addition and subtraction to include sum and difference.</p>	<ul style="list-style-type: none"> • a three-digit number and 100s • add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction • estimate the answer to a calculation and use inverse operations to check answers • solve problems, including missing number problems and using more complex addition and subtraction
<p>Number - multiplication and division</p>	<p>Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays.</p> <p>Group and share small quantities, to understand simple multiplication and division. Doubling and halving.</p>	<p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.</p> <p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs.</p>	<p>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.</p> <p>Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written</p>

		<p>Show that multiplication of 2 numbers can be done in any order.</p> <p>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts.</p> <p>Begin to understand inverse relations (for example, $4 \times 5 = 20$ and $20 \div 5 = 4$).</p>	<p>methods.</p> <p>Solve problems involving multiplication and division.</p>
<p>Number - fractions</p>	<p>Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity</p> <p>Recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity</p>	<p>Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity</p> <p>Write simple fractions, for example $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ Begin to find fractions of lengths, quantities, sets of objects or shapes.</p> <p>Begin to count in fractions up to 10 (EG. 1,</p>	<p>Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.</p> <p>Recognise, find and write fractions of a set of objects with small denominators. Recognise and use fractions as numbers with small denominators.</p> <p>Recognise and show, using diagrams, equivalent fractions with small denominators.</p>

		$1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$).	Add and subtract fractions with the same denominator within one whole $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]. Compare and order fractions. Solve problems that involve all of the above.
Measurement	Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] Recognise and use language relating to dates, including days of the week, weeks, months and years Tell the time to the hour and half past the hour and draw the hands on a clock face to	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. Compare and order lengths, mass, volume/capacity and record the results using >, < and =. Recognise and use symbols for pounds (£) and pence (p); combine amounts to make	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). Measure the perimeter of simple 2-D shapes. Add and subtract amounts of money to give change, using both £ and p in practical contexts. Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.

<p>Measurement</p>	<p>show these times</p> <p>Recognise and know the value of different denominations of coins and notes</p> <p>Compare, describe, solve practical problems and begin to record:</p> <ul style="list-style-type: none"> • lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] • mass/weight [for example, heavy/light, heavier than, lighter than] • capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] • time [for example, quicker, slower, earlier, later, hours, minutes, seconds] <p>Begin to use measuring tools such as a ruler, weighing scales and containers.</p> <p>Begin to understand standard units of measure such as grams, litres and centimetres.</p>	<p>a particular value.</p> <p>Find different combinations of coins that equal the same amounts of money.</p> <p>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.</p> <p>Compare and sequence intervals of time.</p> <p>Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.</p> <p>Know the number of minutes in an hour and the number of hours in a day.</p> <p>Comparing measures includes simple multiples such as 'half as high'; 'twice as wide'.</p> <p>Above</p>	<p>Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight.</p> <p>Know the number of seconds in a minute and the number of days in each month, year and leap year.</p> <p>Compare durations of events [for example, to calculate the time taken by particular events or tasks].</p> <p>Above</p>
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<p>Geometry - properties of shapes position and direction</p>	<p>Recognise and name common 2-D and 3-D shapes, including:</p> <ul style="list-style-type: none"> • 2-D shapes [for example, rectangles (including squares), circles and triangles] • 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] 	<p>Identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line. Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] Compare and sort common 2-D and 3-D shapes and everyday objects Order and arrange combinations of mathematical objects in patterns and sequences. Use mathematical vocabulary to describe position, direction and movement,</p>	<p>Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. Recognise angles as a property of shape or a description of a turn. Identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</p>

		<p>including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).</p> <p>Program robots using instructions given in direction and turns in right angles.</p>	
Statistics	<p>Interpret and construct simple pictograms, tally charts, block diagrams and tables.</p>	<p>Interpret and construct simple pictograms, tally charts, block diagrams and tables.</p> <p>Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.</p> <p>Ask-and-answer questions about totalling and comparing categorical data.</p>	<p>Interpret and present data using bar charts, pictograms and tables.</p> <p>Solve one-step and two-step questions [for example 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.</p>