

Curriculum progression

Mathematics

Year Group	Statutory Document	Supporting Materials	Objectives Key Skills (INTENT)	Key supporting activities (IMPLEMENTATION)
Sunbeams	Early Years Foundation Stage Curriculum	Development Matters	<p>Combine objects like stacking blocks and cups. Put objects inside others and take them out again.</p> <p>Take part in finger rhymes with numbers.</p> <p>React to changes of amount in a group of up to three items.</p> <p>Compare amounts, saying 'lots', 'more' or 'same'.</p> <p>Develop counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence.</p> <p>Count in everyday contexts, sometimes skipping numbers - '1-2-3-5.'</p> <p>Climb and squeeze themselves into different types of spaces.</p> <p>Build with a range of resources.</p> <p>Complete inset puzzles.</p> <p>Compare sizes, weights etc. using gesture and language - 'bigger/little/smaller', 'high/low', 'tall', 'heavy'.</p> <p>Notice patterns and arrange things in patterns</p>	<p>Number rhymes & songs</p> <p>Simple counting 1-1</p> <p>Inset jigsaws</p> <p>Continuous provision activities</p>
Nursery			<p>Develop fast recognition of up to 3 objects, without having to count them individually ('subitising').</p> <p>Recite numbers past 5.</p> <p>Say one number for each item in order: 1,2,3,4,5.</p> <p>Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').</p> <p>Show 'finger numbers' up to 5.</p> <p>Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.</p> <p>Experiment with their own symbols and marks as well as numerals.</p> <p>Solve real world mathematical problems with numbers up to 5.</p> <p>Compare quantities using language: 'more than', 'fewer than'.</p> <p>Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.</p> <p>Understand position through words alone – for example, "The bag is under the table," – with no pointing.</p> <p>Describe a familiar route.</p> <p>Discuss routes and locations, using words like 'in front of' and 'behind'.</p> <p>Make comparisons between objects relating to size, length, weight and capacity.</p> <p>Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc.</p> <p>Combine shapes to make new ones – an arch, a bigger triangle, etc.</p> <p>Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc.</p> <p>Extend and create ABAB patterns – stick, leaf, stick, leaf.</p> <p>Notice and correct an error in a repeating pattern.</p> <p>Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...</p>	<p>Follow 'Master the Curriculum' overview, introducing key mathematical concepts to the children in small groups/ whole class session.</p> <p>Opportunities for mathematical learning in the indoor and outdoor continuous and enhanced provision.</p> <p>Everyday learning opportunities – daily calendar, counting number of children, snack time, positional language.</p>
Reception			<p>Count objects, actions and sounds.</p> <p>Subitise.</p> <p>Link the number symbol (numeral) with its cardinal number value.</p> <p>Count beyond ten.</p> <p>Compare numbers.</p> <p>Understand the 'one more than/one less than' relationship between consecutive numbers.</p> <p>Explore the composition of numbers to 10.</p> <p>Automatically recall number bonds for numbers 0-5 and some to 10.</p> <p>Select, rotate and manipulate shapes to develop spatial reasoning skills.</p> <p>Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.</p> <p>Continue, copy and create repeating patterns.</p> <p>Compare length, weight and capacity.</p> <p>ELG</p> <p>Number</p> <p>Have a deep understanding of number to 10, including the composition of each number.</p> <p>Subitise (recognise quantities without counting) up to 5.</p> <p>Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.</p> <p>Numerical Patterns</p> <p>Verbally count beyond 20, recognising the pattern of the counting system.</p> <p>Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.</p> <p>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally</p>	<p>Following White Rose Maths planning- introducing and consolidating key mathematical concepts such as subitising and number facts.</p> <p>Opportunities for mathematical learning in the indoor and outdoor continuous and enhanced provision.</p> <p>Everyday learning opportunities – daily calendar, counting number of children, snack time, positional language.</p>

Year 1	National Curriculum 2014	White Rose Maths	<p>Number</p> <ul style="list-style-type: none"> Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens Given a number, identify one more and one less Use the language of: equal to, more than, less than (fewer), most, least Identify and represent numbers using objects and pictorial representations including the number line Read and write numbers from 1 to 20 in numerals and words. Represent and use number bonds and related subtraction facts within 20 Add and subtract one digit and two-digit numbers to 20, including zero Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ Count in multiples of twos, fives and tens Recognise, find and name a half as one of two equal parts of an object, shape or quantity Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity 	<p>Measurements and Geometry</p> <ul style="list-style-type: none"> Compare, describe and solve practical problems for: * lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] * mass/weight [e.g. heavy/light, heavier than, lighter than] * capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] * time [e.g. quicker, slower, earlier, later] Sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] Measure and begin to record the following: * lengths and heights * mass/weight * capacity and volume * time (hours, minutes, seconds) Recognise and know the value of different denominations of coins and notes Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. Recognise and use language relating to dates, including days of the week, weeks, months and years Recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [e.g. rectangles (including squares), circles and triangles] * 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres]. describe position, direction and movement, including half, quarter and three-quarter turns. 	<p>Daily maths lessons using White Rose planning guidance</p> <p>Manipulatives provided to support understanding of mathematical concepts before moving to pictorial and abstract methods</p> <p>Practical opportunities to explore concepts such as board games and through cross curricular links I.e. PE</p> <p>Explicit teaching of date when adding to board at the beginning of the day.</p>
Year 2		<p>Number</p> <ul style="list-style-type: none"> Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward Compare and order numbers from 0 up to 100; use <, > and = signs Identify, represent and estimate numbers using different representations, including the number line Read and write numbers to at least 100 in numerals and in words Recognise the place value of each digit in a two-digit number (tens, ones) Use place value and number facts to solve problems Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. Solve problems with addition and subtraction: * using concrete objects and pictorial representations, including those involving numbers, quantities and measures * applying their increasing knowledge of mental and written methods Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs Recognise, find, name and write fractions $1/3$, $1/4$, $2/4$ and $3/4$ of a length, shape, set of objects or quantity Write simple fractions e.g. $1/2$ of $6 = 3$ and recognise the equivalence of $2/4$ and $1/2$. 	<p>Measurements Geometry, Statistics</p> <ul style="list-style-type: none"> Compare and order lengths, mass, volume/capacity and record the results using >, < and = compare and sequence intervals of time 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 Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value Find different combinations of coins that equal the same amounts of money Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change 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. Know the number of minutes in an hour and the number of hours in a day. 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 use mathematical vocabulary to describe position, direction and movement 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) order and arrange combinations of mathematical objects in patterns and sequences interpret and construct simple pictograms, tally charts, block diagrams and simple tables ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ask and answer questions about totalling and comparing categorical data 	<p>Daily maths lessons using White Rose planning guidance</p> <p>Manipulatives provided to support understanding of mathematical concepts before moving to pictorial and abstract methods</p> <p>Practical opportunities to explore concepts such as board games and through cross curricular links I.e. Science</p> <p>Explicit teaching of time through digital and analogue clocks throughout the day</p>	