



# EYFS Mathematics Curriculum

| EYFS Mathematics Educational Programme   | Reference to KS1 Mathematics Programme of Study   | Links to our St. Gabriel's EYFS Curriculum Goals  |
|--|---|---|
| <p>Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.</p> | <p>The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources (for example, concrete objects and measuring tools). At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.</p> | <p>To become a <b>Maths Magician</b> who learns practically, plays games, manipulates objects and apparatus and uses key mathematical language when applying their skills</p> <p>To become an <b>Ambitious Learner</b> who steps up to and enjoys a challenge, perseveres when things get tough and works towards achieving outcomes and their own personal goals</p> |

## Progression of learning/skills in the area of Mathematics

| Learning/ skills prior to Reception  | End of Autumn  | End of Spring   | End of Summer  | Essential learning/skills prior to Year 1  |
|--|--|---|--|--|
| <p>We use the White Rose Maths Scheme to teach Mathematics in EYFS and throughout the school</p> <p>Each phase contains the teaching of <b>Number</b> and <b>Measure, Shape and Spatial Thinking</b></p> <p>Children will be assessed as to whether they are on track with WRM scheme throughout the year</p> <p>At the end of EYFS, Children will be assessed against the two Mathematics ELGs which are 'Number' and 'Numerical Patterns'. There is no ELG for Measure, Shape and Spatial Thinking</p> | <p><b>Number:</b></p> <p>Use number names in play</p> <p>Use 1-1 correspondence to count up to 5 objects</p> <p>Give up to 3 objects when asked and stop when you have enough</p> <p>Recognise some numbers of significance e.g. 3, 4 and 5</p> <p>Identify which group has more and which group has fewer</p> <p>Know that the last number reached when counting tells us how many there are</p> <p>Solve some mathematical problems up to 5</p> <p><b>Measure, Shape and Spatial Thinking:</b></p> <p>Identify most/all colours</p> <p>Use words such as 'big', 'small' and 'heavy' in play</p> <p>Make comparisons between objects e.g. size, length, weight and capacity</p> <p>Identify some 2D shapes</p> <p><b>Phase 1 – Just Like Me</b><br/>Match two objects or pictures<br/>Sort by colour, size, shape, object and more<br/>Identify a group that has more/fewer<br/>Use the words 'more' and 'fewer' to compare two groups<br/>Say when two groups have the same/equal amount<br/>Make comparisons of size, mass and capacity using mathematical language<br/>Complete an ABAB pattern<br/>Create own ABAB pattern<br/>Find mistakes in patterns</p> <p><b>Phase 2 – It's Me 123!</b><br/>Count up to 3 objects using 1-1 correspondence<br/>Recognise numerals 1, 2 and 3<br/>Make representations of 1, 2 and 3 using a variety of objects and some mathematical equipment<br/>Make comparisons of numbers 1, 2 and 3 using mathematical language<br/>Begin to understand that numbers are made up of smaller numbers e.g. 3 can also be made using 2 and 1<br/>Count and subitise sets of objects/pictures<br/>Identify a circle and a triangle<br/>Know that a circle has a curved side and a triangle has 3 straight sides<br/>Find circles and triangles in the environment<br/>Know that triangles of different sizes and orientations are still triangles<br/>Understand and use positional language to describe position</p> <p><b>Phase 3 – Light and Dark</b><br/>Count on and back to 4/5<br/>Count and subitise sets of 4/5 objects/pictures<br/>Make a collection of 4/5 objects and know when to stop when they have enough<br/>Match numbers names to numerals and quantities<br/>Use mark making to represent numbers to 5<br/>Represent numbers to 5 on a 5 frame<br/>Know that if a 5 frame is full then there are 5<br/>Join in with number songs with a focus of 5<br/>Predict how many there will be when one more is added or taken away<br/>Understand the link between counting forwards and the 1 more pattern<br/>Understand the link between counting backwards and the 1 less rule<br/>Identify a square and a rectangle<br/>Know that squares and rectangles have 4 straight sides and 4 corners<br/>Recognise these shapes in the environment<br/>Build own squares and rectangles<br/>Know that rectangles of different sizes/orientations are still rectangles and square of different sizes/orientations are still squares<br/>Know and explain the difference between a square and rectangle<br/>Order key events in routines<br/>Use language such as 'day', 'night', 'morning', 'before', 'tomorrow' etc.<br/>Understand the passing of time using calendars e.g. advent</p> | <p><b>Phase 4 – Alive in 5!</b><br/>Know that the number name zero and the numeral 0 means 'nothing' or 'all gone'<br/>Know that 0 is one less than 1<br/>Compare quantities to 5 using a variety of objects and representations<br/>Explore the different compositions of 4 and 5 e.g. 4 can be composed of 2 and 2 or 3 and 1 or 1, 1, 1 and 1 etc.<br/>Know that numbers can be composed of 2 parts or more than 2 parts<br/>Subitise to 5 without counting<br/>Estimate which objects is the heaviest and then use a balance scale to check<br/>Use the words heavy, heavier than, heaviest, light, lighter, lighter than and lightest to compare items<br/>Know that bigger items are not always the heaviest e.g. inflatable beach ball and a rock<br/>Identify a container that is full, empty, half full, nearly full and nearly empty<br/>Make comparisons of containers using the words 'tall', 'thin', 'narrow', 'wide' and 'shallow'</p> <p><b>Phase 5 – Growing 6 7 8</b><br/>Count 6, 7 and 8 objects using 1-1 correspondence<br/>Represent 6, 7 and 8 in different ways<br/>Count out the require number of objects from a larger group<br/>Make arrangements of 6, 7 and 8 in small groups to support Subitising e.g. I can see a 4 and a 4 in that representation of 8<br/>Know 1 more and 1 less than a number to 8<br/>Know that 'a pair' means 2<br/>Arrange quantities into pairs and notice some quantities will have an odd one left over with no partner<br/>Combine 2 groups to find how many there are altogether<br/>Subitise when combining 2 groups to find how many there are altogether<br/>Use specific mathematical vocabulary related to length (longer and shorter), height (taller and shorter) and breadth (wider and narrower)<br/>Make comparisons using objects e.g. The sand tray is 4 blocks long. The table is 5 blocks long.<br/>Order and sequence important times in the day using language such as 'now', 'before', 'later', 'soon', 'after', 'then' and 'next'<br/>Use the words 'yesterday', 'today' and 'tomorrow' when talking about regular events that happen e.g. PE sessions<br/>Know that some processes such as growing vegetables take a longer time</p> <p><b>Phase 6 – Building 9 and 10</b><br/>Count forwards and backwards to 9 and 10<br/>Represent 9 and 10 in different ways<br/>Make arrangements of 9 and 10 in small groups to support Subitising e.g. I can see a 5 and a 5 in that representation of 10<br/>Know that a 10 frame is full when there are 10<br/>Use 10 frames, fingers and bead strings to subitise groups of 9 and 10<br/>Line items up to make direct comparisons<br/>Explore number bonds to 10 using objects<br/>Identify shapes that stack and shapes that roll<br/>Explain why some shapes stack and others roll<br/>Build using 3-D shapes<br/>Begin to name 3-D shapes<br/>Explore similarities and differences between 3-D shapes<br/>Identify and complete patterns which use items more than once e.g. ABB, AAB, AABB, AABBB etc.</p> | <p><b>Phase 7 – To 20 and beyond</b><br/>Consolidate key skills – Subitising, counting, composition, sorting and matching, comparing and ordering<br/>Build and identify numbers to 20 and beyond using a range of resources<br/>Know that larger numbers are composed on full 10s and part of the next 10 (10 frames, numerals, towers of cubes, bead strings and more)<br/>Recognise that the numbers 1-9 repeat after every full 10 e.g. 11 is 1 full 10 and 1, 12 is 1 full 10 and 2 etc.<br/>Count on and back beyond 10 using representations as a guide<br/>Count on or back from different starting points<br/>Say what comes before and after a given number<br/>Place sequences of numbers in order<br/>Find larger numbers on number tracks and 100 squares<br/>Select and rotate shapes to fill a given space<br/>Explain why a shape wouldn't fit a space<br/>Make arrangements with shapes and describe the position of the shapes using positional language<br/>Select shapes to complete tangram outlines</p> <p><b>Phase 8 – First Then Now</b><br/>Consolidate key skills – Subitising, counting, composition, sorting and matching, comparing and ordering<br/>Know that the quantity of a group is changed when adding more<br/>Count on when adding more<br/>Create mathematical stories using 'first', 'then', 'now'<br/>Represent number stories using 10 frames, number tracks and fingers<br/>Know that the quantity of a group is changed when taking away<br/>Take away by counting out all the items at the start, take away the required amount practically, and then subitise or recount to see how many there are left<br/>Know that shapes can be combined and separated to make new shapes<br/>Explore the different ways a given shape can be built using smaller shapes<br/>Explore the different shape they can make by combining a set of given shapes in different ways</p> <p><b>Phase 9 – Find my pattern</b><br/>Consolidate key skills – Subitising, counting, composition, sorting and matching, comparing and ordering<br/>Know that doubling means 'twice as many'<br/>Build doubles using real objects and mathematical equipment and say the doubles as they see them e.g. Double 2 is 4<br/>Say when items are not shared equally<br/>Recognise and make equal groups e.g. 3 crackers on each plate<br/>Notice that sometimes there are items left over and come up with their own suggestions for how to resolve this<br/>Notice that some quantities will share equally into 2 groups and some won't<br/>Notice that some quantities can be groups into pairs and some will have 1 left over<br/>Notice odd and even structures on numicon shapes and pair-wise 10 frames<br/>Replicate simple constructions, models, real places and places in stories<br/>Use positional language to describe where objects are in relation to other items e.g. The yellow cube in next to the pink cube</p> <p><b>Phase 10 – On the move</b><br/>Consolidate key skills – Subitising, counting, composition, sorting and matching, comparing and ordering<br/>Engage in extended problem solving and develop critical thinking skills<br/>Investigate relationships between numbers and shapes e.g. numicon shapes and Cuisenaire rods<br/>Copy, continue and create a widening range of repeated patterns and symmetrical constructions<br/>Use maps to see where things are in relation to other things<br/>Create own maps to represent the models they build, familiar places and place sin stories</p> | <p><b>Number ELG</b><br/>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><b>Numerical Patterns ELG</b><br/>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><b>There is no ELG for Measure, Shape and Spatial Thinking</b></p> <p><b>Number</b></p> <p><b>Number and Place Value:</b><br/>Secure understanding of numbers to 10, representing numbers up to 10 in different ways and using language to compare numbers/quantities/pictures<br/>Say and order ordinal number to 5</p> <p><b>Addition and subtraction:</b><br/>Linking addition and subtracting to the part-part-whole model and to be able to understand that addition is getting bigger and subtracting is getting smaller</p> <p><b>Multiplication and Division:</b><br/>Know that multiplication is repeated addition and that division is sharing</p> <p><b>Fractions:</b><br/>Understanding the concept of whole and half</p> <p><b>Shape, Space and Measure</b></p> <p><b>Measurement:</b><br/>Use appropriate language to compare length, weight, capacity and time</p> <p><b>Geometry - Properties of shapes:</b><br/>Name circle, triangle, square and rectangle and describe their properties to help group shapes. To begin to know what 3D shapes look like and that they are different to 2D shapes</p> <p><b>Geometry - Position and direction:</b><br/>Understand and use positional language (prepositions) beginning to use the words 'left' and 'right'</p> |



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