



St Joseph
Catholic Multi Academy Trust



Reception

Mathematics

Mathematics		<p>Educational Programmes: 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>					
Numerical Pattern and Number	Knowledge and Skills	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
				<p>Early Mathematical Experiences</p> <ul style="list-style-type: none"> - Classifying objects based on one attribute - Matching equal and unequal sets - Comparing objects and sets - Ordering objects and sets <p>Pattern and Early Number</p> <ul style="list-style-type: none"> - Recognise, describe, copy and extend colour and size patterns - Count and represent the numbers 1 to 3 - Estimate and check by counting 	<p>Numbers within 6</p> <ul style="list-style-type: none"> - Count up to six objects. - One more or one fewer - Order numbers 1 – 6 - Conservation of numbers within six <p>Addition and subtraction within 6</p> <ul style="list-style-type: none"> - Explore zero - Explore addition and subtraction <p>Measures</p> <ul style="list-style-type: none"> - Estimate, order compare, discuss and explore capacity, weight and lengths <p>Shape and sorting</p>	<p>Numbers within 10</p> <ul style="list-style-type: none"> - Count up to ten objects - Represent, order and explore numbers to ten - One more or fewer, one greater or less <p>Calendar and time</p> <ul style="list-style-type: none"> - Days of the week, seasons - Sequence daily events <p>Addition and subtraction within 10</p> <ul style="list-style-type: none"> - Explore addition as counting on and subtraction as taking away <p>Grouping and sharing</p>	<p>Number patterns within 15</p> <ul style="list-style-type: none"> - Count up to 15 objects and recognise different representations - Order and explore number patterns to 15 - One more or fewer <p>Doubling and halving</p> <ul style="list-style-type: none"> - Relationship between doubling and halving <p>Shape and Pattern</p> <ul style="list-style-type: none"> - Describe and sort 2-D and 3-D shapes - Recognise, complete and create patterns

		<ul style="list-style-type: none"> - Describe, and sort 3-D shapes - Describe position accurately 	<ul style="list-style-type: none"> - Counting and sharing in equal groups - Grouping into fives and tens - Relationship between grouping and sharing 	<p>Money</p> <ul style="list-style-type: none"> - Coin recognition and values - Combinations to total 20p - Change from 10p
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Implementation	<ul style="list-style-type: none"> - Deliver the Ark 'Mathematics Mastery' curriculum daily to children. - Build counting opportunities into everyday routines such as registration, tidying up, lining up or counting out pieces of fruit at snack time. - Sing counting songs and number rhymes and read stories that involve counting. - Provide images such as number tracks, calendars and hundred squares indoors and out, including painted on the ground, so children become familiar with two-digit numbers and can start to spot patterns within them. - Within the environment, provide a range of visual models of numbers: for example, six as double three on dice, or the fingers on one hand and one more, or as four and two with ten frame images. - Provide high-quality pattern and building sets, including pattern blocks, tangrams, building blocks and magnetic construction tiles, as well as pupil found materials. - Teach children to solve a range of jigsaws of increasing challenge to develop reasoning skills.
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<p>Early Learning Goal</p> <p>Number</p> <p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> - Have a deep understanding of number to 10, including the composition of each number; - Subitise (recognise quantities without counting) up to 5; - 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>Numerical Patterns</p> <p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> - Verbally count beyond 20, recognising the pattern of the counting system; - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.
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