




Year Two Mathematics	Intent	Implementation	Impact
	<p>At St John Vianney Catholic Primary School, we recognise that Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. We aim to provide a high-quality mathematics education with a mastery approach so that all children:</p> <ul style="list-style-type: none"><li>• become fluent in the fundamentals of mathematics;</li><li>• reason mathematically;</li><li>• can solve problems by applying their mathematics.</li></ul> <p>(National Curriculum 2014)</p> <p>Our intent for mathematics is to teach a rich, balanced and progressive curriculum using Maths to reason, problem solve and develop fluent conceptual understanding in each area. Staff are supported and aided in their roles ensuring confidence in the skills and facts they are required to teach. Lessons are child focused and maths is kept fun and current in school.</p> <p>Our curriculum allows children to better make sense of the world around them relating the pattern between mathematics and everyday life. Our policies, resources and schemes support our vision e.g. our calculations policy linked to our Mastery Text Book resource, Power Maths, which is based on White Rose Maths, and NCETM Teaching for Mastery. The mapping of Mathematics across school shows clear progression in line with age-related expectations and the National Curriculum.</p> <p>Mathematics in our school is enhanced by our focus on additional practise of key mathematics skills through Assertive Mentoring Weekly Skills Checks and our focus on key instant recall facts (KIRFs). We promote and encourage over learning of key facts through our use of Numbots and TT Rockstars competitions. We constantly seek to improve our provision and we are proud of enhancements made through our collaboration with partner schools within our M.A.C. and our work to develop our mastery approach to mathematics through our involvement with the Central Maths Hub.</p>	<p>The curriculum hours for mathematics are non-negotiable and followed by all staff.</p> <p>Teachers plan three lessons with a number focus per week and two lessons linked to either geometry, statistics or measures.</p> <p>Knowledge organisers linked to each of the mathematical areas, support the children with their learning.</p> <p>High quality teaching responds to the needs of children. Teachers use questioning well and aim to identify and address any misconceptions at an early stage.</p> <p>Planning: Lessons are planned and sequenced so that new knowledge and skills build on previous learning. Staff refer to the Calculation Policy when teaching formal methods but also understand that sometimes children find their own efficient methods along the way. Number bonds and times tables practice take place weekly to give children the opportunity to practise and improve their rapid recall of key mathematics facts.</p> <p>Teaching: At St John Vianney we employ a variety of teaching styles and opportunities for children to learn and develop their Mathematical skills and competencies, both individually and collaboratively. Our pupils are encouraged to physically represent mathematical concepts. Objects and pictures are used to demonstrate and visualise abstract ideas, alongside numbers and symbols.</p> <p>Concrete – children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.</p> <p>Pictorial – children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.</p> <p>Abstract – With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.</p>	<p>The impact of our mathematics curriculum is that children understand the relevance of what they are learning in relation to real world concepts. We have fostered an environment where Maths is fun and where it is accepted that sometimes we will make errors on our journey to finding an answer. The children understand that learning from mistakes is a key skill.</p> <p>The children's Mathematics books demonstrate the use of a range of activities and show evidence of fluency, reasoning and problem solving. Positive verbal and written feedback and early intervention support the children to strive to be the best mathematicians they can be and ensure that a greater proportion of children are on track.</p> <p>The Mathematics leader, in collaboration with the Senior Leadership Team, takes responsibility for the monitoring of the Mathematics curriculum and the standards achieved by the children.</p> <p>The Mathematics leader monitors for appropriate pitch and progression at least once every half term. This monitoring takes the form of:</p> <ul style="list-style-type: none"><li>• Lesson observations with written feedback;</li><li>• Learning walks and pupil voice conversations;</li><li>• Planning scrutiny followed by support where necessary;</li><li>• Book scrutiny per term;</li><li>• Termly data analysis;</li><li>• Moderation with other Mathematic Subject Leaders with the M.A.C.</li></ul> <p>Data is collected half-termly and reported to SLT. All teachers contribute to a termly Pupil Progress Meetings, where the data is analysed to highlight those pupils not meeting expectations. The meetings focus on target setting and identifying the next steps to support the children to make good or better progress.</p>



Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Geometry - Properties of Shape	Geometry – Position and Direction	Geometry – Statistics	Measurement
I can count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.	I can recall and use addition and subtraction facts to 20 fluently, and derive and use related facts to 100.	I can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	I can recognise, find, name and write fractions $\frac{1}{3}$ , $\frac{1}{4}$ , $\frac{2}{4}$ and $\frac{3}{4}$ of length, shape, set of objects or quantity.	I can identify and describe the properties of 2-D shapes including the number of sides and line symmetry in a vertical line.	I can order and arrange combinations of mathematical objects in patterns and sequences.	I can interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	I can choose and use appropriate standard units to estimate and measure length/height(m/cm); mass (kg/g); temperature (C); capacity (litres/ml) to the nearest approximate unit, using rulers, scales, thermometers and measuring vessels.
I can recognise the place value of each digit in a two-digit number (tens, ones).	I can use place value number facts to solve problems.	I can calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.	I can write simple fractions, for example: $\frac{1}{2}$ of 6 = 3, and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ .	I can identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.	I can 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).	I can ask and answer simple questions by counting the number of objects in each category and by sorting the categories quantity.	I can compare and order lengths, mass, volume/capacity and record the results using <, > and =.
I can identify, represent and estimate numbers using different representation including the number line.	I can add and subtract numbers using concrete objects, pictorial representations, and mentally, including adding three one-digit numbers.	I can show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.		I can identify 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid).		I can ask and answer questions about totalling and comparing categorical data.	I can recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.
I can compare and order numbers from 0 up to 100; use <, > and = signs.	I can add and subtract numbers using concrete objects, pictorial representations, and mentally, including a two-digit number.	I can solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.		I can compare and sort common 2-D and 3-D shapes and everyday objects.			I can find different combinations of coins that equal the same amounts of money.
I can read and write numbers to at least 100 in numerals and in words.	I can add and subtract numbers using concrete objects, pictorial representations, and mentally, including a two-digit number and ones.						I can solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.



Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Geometry - Properties of Shape	Geometry – Position and Direction	Geometry – Statistics	Measurement
	I can solve problems with addition and subtraction, applying my increasing knowledge of mental and written methods.						I can compare and sequence intervals of time.
	I can solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures.						I can 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.
	I can show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.						I can identify the number of minutes in an hour and the number of hours in a day.
	I can recognise and use the inverse relationship between addition, subtraction and use this to check calculations and solve missing number problems.						

### End of Key Stage 1 Outcomes

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 4 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.