



Curriculum statement for Maths			
Intent	<p>At St John’s we believe that the teaching of mathematics is a fundamental life skill, which will not only equip our children for secondary school, but will ensure they are prepared for adulthood. By the time our children leave year 6, they have a solid foundation in the four operations, can use their times table knowledge and the corresponding division facts and apply that knowledge to a wide range of mathematical processes. Our children are able to reason mathematically, using subject appropriate language, and can use their knowledge to explain concepts and explore the world around them. Maths is very much a cross curricular subject; the skills taught are vital for sciences and design and technology as well as computing, art, geography and history. We aim to highlight these connections giving our children a strong sense of purpose and real life context when learning maths.</p> <p>The National Curriculum aims to ensure that all pupils:</p> <ul style="list-style-type: none"> • Develop fluency in the fundamentals of mathematics through varied and frequent practice – increasing in complexity over time to develop conceptual understanding and the ability to recall and apply knowledge with speed and accuracy. • Reason mathematically through the process of following a line of enquiry, conjecturing relationships and generalisations, developing an argument, justification and proof using mathematical language. • Problem solve by applying their knowledge to a variety of problems with increasing sophistication, break down problems into simpler steps and finding solutions. <p>At St John’s, children’s progression is dictated by their level of secure understanding to ensure a solid foundation for them to build upon, in order to master more complex concepts in the future. We support those who are less fluent through practise and further consolidation and we challenge those children who have a strong understanding of concepts through investigation and exploration.</p>		
	Key learning outcomes	Knowledge	Skills



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	<p>High level summary of what the children should know by the end of KS2.</p> <p>By the end of KS2, our children should have a strong understanding of the number system and be fluent in their application -including place value to one million, decimals, percentages and fractions. Children should know how numbers relate to one another, and be able to see patterns in calculations, geometry and statistics. They should have a secure knowledge of the four operations, they should have fluent times table knowledge, know the corresponding division facts and understand the nature of these operations (commutative and non commutative; repeated addition and repeated subtraction). Children should have a secure knowledge of prime numbers, square and cubed numbers and how these relate to 2D and 3D shapes; multiples and factors, area, perimeter, volume, capacity and mass. Children will have a secure knowledge of co-ordinates, the</p>	<p>High level summary of what the children should be able to do by the end of KS2.</p> <p>By the end of KS2, our children should be able to confidently use their knowledge to solve problems and to reason – being able to defend their methodology. They should be able to apply all their skills to a wide variety of mathematical calculations and know which operations- or sequence of operations - are needed to solve more complex problems. They should be able to recall multiplication and related division facts quickly and use these in mental maths calculations as well as apply to written work. They should be able to approach mathematical investigations – work independently, in partnerships or teams to offer solutions, by applying a logical and sequential approach to their hypothesis.</p>	<p>How do the children use their subject specific vocabulary?</p> <p>At St John’s we use correct and consistent vocabulary from Early Years to year 6 and children should become familiar and proficient with the vocabulary to which they are exposed. Adults in school should ensure that the correct vocabulary and terminology is used at all times, by both themselves and their pupils. Children should use the same vocabulary when speaking to one another about maths work and when participating in class and groups discussions.</p>
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	<p>properties of shapes, angles, statistics. Children should be secure in using metric measurements and converting between mm, cm, and m. Children should be able to apply their skills to problem solving and reasoning across all areas of taught maths.</p>		
<p>Implementation</p>	<p>Our children are taught maths every day and follow the White Rose Maths Scheme of Learning – a mastery approach built on small steps to support their learning. All children have access to resources – from manipulatives to visual – to scaffold their learning journey in a way that benefits each individual. Each classroom has a maths board which is used as a working wall – giving the children a reference point for the topic being studied. The scheme follows a concrete – pictorial – abstract format, thus ensuring children have a clear understanding of <i>what</i> they are doing as well as <i>how</i> to do it. Children can move forwards and backwards through these stages at their own pace and we actively encourage resources to be used in the classroom at all times, regardless of age or stage. Where there is an identified need and it has been deemed appropriate and with support from the SENCo, children will work on the corresponding curriculum of a lower year group in order to ensure secure foundations and close gaps.</p> <p>We have particular focus on Number Bond and Times Table knowledge throughout the school, with the children moving through a series of challenges through the Times Table Rockstar and Numbot programs at their own pace – these skills are vital for success in school and beyond.</p> <p>In EYFS, the children focus on number recognition and the concepts of the four operations, in an age appropriate way; different activities are used in their play-based sessions to allow them to practise using these skills. The children are encouraged to count throughout the day and they have</p>		



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opportunities to consolidate their subitising skills across their curriculum. The Early Years maths curriculum includes calculating simple addition and subtractions, shape, space and measure. Through the Mastering Number program, children's fluency and understanding of number is continually developed in EYFS and KS1, while in KS2...

In EYFS our children are taught to:

- Learn new vocabulary.
- Use new vocabulary throughout the day
- Count objects, actions and sounds.
- Count beyond ten.
- Subitise.
- Link the number symbol (numeral) with its cardinal number value
- Compare numbers.
- Understand the 'one more than/one less than' relationship between consecutive numbers.
- Explore the composition of numbers to 10.
- Automatically recall number bonds for numbers 0-5 and some to 10.
- Compare length, weight and capacity.
- Select, rotate and manipulate shapes in order to develop spatial reasoning skills.
- Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.
- Draw information from a simple map.
- Continue, copy and create repeating patterns.

In KS1 and KS2 the White Rose curriculum, through quality teaching, enables children to build on their key skills as they progress through the school. Children are taught through a wide variety of teaching tools including – interactive white board slides, PowerPoints, modelling and discussion, practical application, investigations, reasoning and problem solving.

All KS1 and KS2 children cover:



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- Number and Place Value
- Addition and Subtraction
- Multiplication and Division
- Measurement (including capacity and mass)
- Fractions
- Time
- Money
- Statistics
- Properties of Shape
- Position and Direction
- Decimals / Percentages (UKS2)

Each topic encompasses problem solving and reasoning activities facilitating the development of these skills and the use of correct mathematical language.

Resources, adult and peer support are utilised to scaffold learning throughout the school from EYFS to Year 6. Children are encouraged to work with partners and in small groups for investigation and discussion. Children are encouraged to choose their own levels but are guided to more or less complex tasks where necessary, to ensure they are successful and challenged prior to moving on to the next stage of their learning.

Working walls are used by staff and accessible to children with consistent displays throughout the school.

Though the West Horsham School's Network, children are given the opportunity to work with peers from other schools and with other teachers to enhance their skills – this is also provided for more able children who benefit from working in a more challenging environment with a secondary school teacher.

Children in year 1 to 6 receive maths homework each week to embed concepts taught in class.

For Long Term Plans, sequencing, knowledge and skills progression, please refer to the White Rose Progression Document



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<p>Impact</p>	<p>By the end of Year 6, we intend that our children will have developed a bank of efficient and accurate skills that can be used to calculate effectively and confidentially. Children will be able to apply these calculation skills and understanding of other mathematical processes to become confident and resilient problem-solvers with the ability to reason and articulate their ideas mathematically. Our children will be confident to tackle a wide range of mathematical problems and will be able to choose the most effective equipment and strategies to support them. Our children are aware of the importance of maths in everyday life and are familiar with real life application. We ensure children develop a positive mind-set towards their maths learning and, within school, maths is promoted as being an exciting and enjoyable subject in which they can investigate and ask questions; be confident making mistakes and know that mistakes are key to learning. Our assessment process monitors end of unit progress using the White Rose end of unit assessment tests – allowing interventions to address misconceptions – and each term children sit the White Rose end of term assessment. Our feedback and interventions support children to strive to be the best mathematicians they can be.</p>