



Mathematics Curriculum

Intent, Implementation, Impact Statement

Intent	Implementation	Impact
<p>Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems.</p> <p>Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment.</p> <p>A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.</p> <p>At St Augustine's, children are encouraged to make mistakes in a safe and supportive environment. They are supported to discuss these misconceptions with their peers and staff alike. Here at St Augustine's, we place oracy at the heart of our learning through shared work and class discussions.</p>	<p>In school we ensure we follow 'The National Curriculum programmes of study for Mathematics 2014' and, The Development Matters statements linked to Maths: Number, and Maths: Shape, Space and Measures in the Early Years Foundation Stage. We also incorporate the 2020 non-statutory 'Ready to Progress' guidance.</p> <p>As a school we use the White Rose Maths scheme of learning as a guide for small steps in learning. We ensure only high quality resources are used to support learning and these are selected from the NCETM resources Ready to Progress Documents, Gareth Metcalfe's 'I see Reasoning' documents and NCETM 'Teaching for Mastery' Resources (https://www.ncetm.org.uk/classroom-resources/assessment-materials-primary/).</p> <p>The White Rose calculation policy is used within school to ensure a consistent approach to teaching the four operations over time.</p> <p>At the start of each new topic, key vocabulary is introduced and revisited regularly to develop language acquisition, embedding as the topic progresses and is highly visible on Maths Working Walls so the children can use them regularly and correctly when using verbal or written explanations in their work.</p> <p>All lessons begin with a 'flashback 4' – a short assessment to support retrieval practice and develop long-term memory.</p> <p>Children are taught through clear modelling and have the opportunity to develop their knowledge and understanding of mathematical concepts. Our approach incorporates using concrete objects, pictures, words and numbers to help children explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding at all levels.</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>Children at St Augustine's understand and value the importance of Mathematics, this is evident through pupil voice and monitoring which takes place by the curriculum leader.</p> <p>We want children to be confident in making rich connections across mathematical ideas as a result of developing fluency, mathematical reasoning and competence in solving increasingly sophisticated, contextual problems during their time at St Augustine's.</p> <p>Our pupils will be able to apply their mathematical knowledge across the curriculum and to realise that mathematics has been developed over centuries. As our pupils progress further in their education, we intend for them to be able to understand the world, have the ability to reason mathematically and to have a sense of enjoyment and curiosity about the subject.</p> <p>Through first quality teaching, guidance and effective feedback, children will: Clearly explain their reasoning and justify their thought processes Quickly recall facts and procedures</p>

<p>Use of appropriate vocabulary is modelled throughout lessons by both staff and children, allowing everyone to ‘talk like a mathematician’. Once a child can articulate their understanding of a concept, they can truly begin to make connections within their learning.</p> <p>At our school, the majority of children will be taught the content from their year group only. They will spend time becoming true masters of content, applying and being creative with new knowledge in multiple ways.</p> <p>Sequence & structure <i>How does the maths curriculum plan set out the sequence and structure of how we’ll teach the knowledge and skills?</i></p> <p>We follow the National Curriculum, which sequences and structures the teaching into the year groups. In order to ensure this curriculum is covered in full and in manageable and logical steps, we follow the White Rose planning in EYFS, KS1 and KS2.</p>	<p>Children work on the objective at whatever entrance stage they are assessed as being at. Children can ACQUIRE the skill (fluency), APPLY the skill (problem solving) or DEEPEN the skill (reasoning) within the lesson.</p> <p>Children move through the different stages of their learning at their own pace. Children who have shown their understanding at a deep level within the unit, will have opportunities to apply these skills in a GREATER DEPTH activity. This should be challenging and ensure that children are using more than just one skill to be able to answer the mathematical problems. Reasoning and problem solving are integral to the activities children are given to develop their mathematical thinking. Resources are readily available to assist demonstration of securing a conceptual understanding of the different skills appropriate for each year group.</p> <p>Children are encouraged to explore, apply and evaluate their mathematical approach during investigations to develop a deeper understanding when solving different problems/puzzles. A love of maths is encouraged throughout school via links with others subjects, applying an ever-growing range of skills with growing independence.</p> <p>Special Educational Needs & Disabilities (SEND) Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Where required, children’s support plans incorporate suitable objectives from the National Curriculum for Mathematics and teachers keep these in mind when planning work. These targets may be worked upon within the lesson as well as on a 1:1 basis outside the mathematics lesson. Maths focused intervention in school helps children with gaps in their learning and mathematical understanding. These are delivered by class teachers and trained support staff and overseen by the SENCO and/or the class teacher. Within the daily mathematics lesson teachers have a responsibility to not only provide differentiated activities to support children with SEND but also activities that provide sufficient challenge for children who are high achievers. It is the teachers’ responsibility to ensure that all children are challenged at a level appropriate to their ability.</p> <p>Multiplication Tables Check From the 2019/20 academic year onwards, schools in England will be required to administer an online multiplication tables check (MTC) to year 4 pupils. The purpose of the MTC is to determine whether pupils can recall their times tables fluently, which is essential for future success in mathematics. It will help schools to identify pupils who have not yet mastered their times tables, so that additional support can be provided. To support the children with their multiplication practice we use ‘Times Table Rockstars’ as an online and fun learning platform which also offer resources to be used in the classroom.</p>	<p>Have the flexibility and fluidity to move between different contexts and representations of mathematics Have the ability to recognise relationships and make connections in mathematics Be happy, confident, articulate and autonomous learners with a life-long passion for learning Leave our school at the end of KS2 prepared for the next step in their mathematical education.</p> <p>Summative assessments takes place at the end of each term (NTS Assessments and KS1/2 SATs in May) and children’s progress and attainment is discussed with senior leaders in termly pupil progress meetings.</p> <p>Formative assessment takes place on a daily basis and teachers adjust planning accordingly to meet the needs of their class.</p> <p>Teachers use formative assessment to evaluate the learning during a lesson. They may ask questions to check understanding, or scrutinise independent work in order to identify common misconceptions or share thinking. Such assessment allows teachers the flexibility to intervene in a lesson to remind, redirect or reteach pupils as required.</p>
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