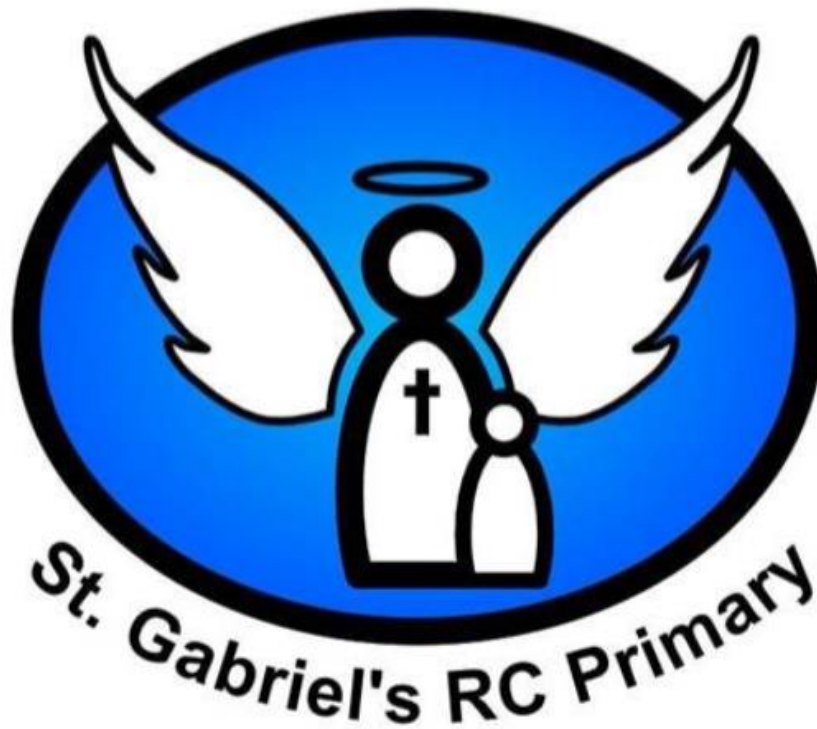




MATHS

Intent, Implementation and Impact Policy

Intent, Implementation and Impact in Maths

INTENT	Subject Statement	At St Gabriel's we believe all children are capable of succeeding in mathematics and our focus is developing confident, resilient mathematicians who have an in depth understanding of mathematics which can be transferred and applied in different contexts. We are committed to ensuring the children are able to make sense of the world around them by understanding the importance of mathematics in their everyday lives. At our school we teach a rich, coherent and progressive curriculum where we use a wide range of mathematical resources to support the children's learning through a concrete, pictorial and abstract (CPA) approach. Throughout the children's mathematical learning journey they will have opportunities to make connections, reason, problem solve and develop fluent conceptual understanding.
	Subject Expectations	At the beginning of every day, the children are to complete the flashback 4 work from White Rose in their morning maths books. Teachers are expected to teach maths every day for at least 45 minutes a day. Evidence of maths lessons needs to be in the books or on seesaw. Separate number skill lessons are timetabled for 15 minutes every day. 10 minutes is to be focused on number skills and 5 minutes is to be dedicated to counting. EYFS and KS1 are to follow the mastering number scheme during this time. KS2 are to use the ready to progress documents to inform their planning for number skill sessions. Every week the children are expected to complete a number bonds test or times tables test and the results are to be recorded. Year 3 and Year 4 are expected to be going on Times Tables Rockstars for 30 minutes a week in preparation for the multiplication check.
	Conditions for learning	<u>Displays / Working Environment</u> Teachers are expected to show their current learning journey on their working walls. The working walls are to be divided into concrete, pictorial and abstract with vocabulary displayed to support the children's understanding. The working wall is to be used as another resource to support the children's learning so the working wall needs to be clear and coherent. Resources are to be easily accessible for the children. <u>Learning Behaviours / Attitudes to Learning</u> ➤ Active and engaged- teachers plan engaging lessons and promote a positive attitude to maths. ➤ Resilience- we encourage the children to never give up and persevere when faced with challenges. As a school we promote the 'power of yet' In EYFS and KS1 we use the 'not yet Yeti'. ➤ Collaborative- we provide opportunities for the children to work collaboratively. ➤ Making links- we offer opportunities for the children to make links with their learning where they are able to apply their prior knowledge to problem solve and/or reason. ➤ Independence- we scaffold our work so all the children have the opportunity to work independently.

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	Planning	<u>Progression and Sequencing</u> At St Gabriel's we follow the White Rose scheme of work. We use the scheme to inform our planning by following the small steps to ensure curriculum progression and coherence. Teachers are to make and adapt resources to meet the needs of the learners. The White Rose scheme of work links with the National Mathematics Curriculum objectives. <u>Planning</u> Teachers are to use the school's format to plan their maths learning journey using the White Rose small steps to inform their teaching. <u>Structure of Lessons</u> Teachers are expected to think about what they want their students to achieve by the end of the lesson, how best for the children to achieve that end goal and how is best to support children who may need it. It is important that teachers see lessons as a coherent learning journey. The following is a guide in the structure of a maths lesson <i>I do, we do, you do</i> - Teacher input to whole class - Teachers model the content, included a complete example to talk through - Teachers present opportunities to solidify content in either the following: non-examples, variations of representation, reasoning opportunities, for example true or false? What mistake has been made? - Children practise the content on whiteboards or using concrete resources, allowing teachers the chance to assess who needs support and identify misconceptions - Children complete work, with reasoning and problem solving opportunities to deepen their understanding and consolidate their learning. <u>Resourcing</u> <u>EYFS resources</u> - Numicons - Number pebbles - Multi link cubes - Number blocks - Dice - Ten frames - Five frames - Counters - Balancing scales - Timers - 2d and 3d shapes - Number lines - Books linked to shape <u>Every classroom has access to the following for every child (Year 1-Year 6)</u> - Place value counters (including decimal place value counters for UKS2) - Base ten resources (dienes) - Blank counters/ double sided counters - Ten frames (KS1) - 0-100 number lines - Multi-link cubes - hundred squares - Multiplication grids - Dice - Rulers
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		- Clocks are shared between year groups. - Mirrors are shared between year groups. - Place value sliders shared between Year 4-Year 6 <u>The following resources are located in the Moon room</u> - 2D and 3D shapes (relative to all year groups) - 3D shape building tools (relative to KS2, LKS2 in particular) - weighing scales, both electronic and balancing scales. - metre sticks - stop watches (relative to Y3 in particular) - cuisenaire rods, including a larger teacher set for modelling - Fraction wall resources
IMPLEMENTATION	Curriculum	<u>Scope</u> We follow White Rose to ensure the National Curriculum objectives are covered for each year group. Challenge is well thought out through the use of open ended investigations and activities that require using transferrable skills. <u>Sequencing</u> We sequence our learning journey by following the White Rose small steps. Within these small steps, we ensure we offer opportunities to recap and consolidate previous learning as well as deepen their understanding. <u>Knowledge</u> ➤ Declarative knowledge- I know that. Consists of number facts. ➤ Procedural knowledge- I know why. Series of small steps to solve mathematical problems. ➤ Conditional knowledge- I know when. Gives the children opportunity to reason and problem solve.

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	Pedagogy Teaching and Learning Quality 1st teaching based on current research	<u>Learning</u> ➤ CPA approach for all learners ➤ Opportunities to consolidate their learning through the use of flashback 4. ➤ Declarative knowledge is practised through the use of weekly number bond or times tables test as well as the use of maths badges. ➤ Reasoning activities are provided for all children so they can explain how they worked out their answer. ➤ Challenge is provided to deepen their knowledge and understanding. <u>Teaching</u> A range of learning and teaching strategies are utilised throughout the teaching of Maths as detailed below: - modelling - provide models / guide pupil practice independent practice; - enabling and deliberate practice; - daily review of previously taught concepts through the use of flashback 4. - new content of knowledge and skills introduced in small steps; - spacing and interleaving - ensure cognitive load theory practices are utilised from short term memory to long term memory; - growth mind-set; - metacognition; - build resilience; - scaffolding; - use of technology.
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	Meeting the needs of the learner	<u>Planning</u> <i>When planning, the teachers need to ensure the needs of the learners are met and this is evident in their plan.</i> <u>Provision for SEND / disadvantaged</u> <i>Teaching and learning support strategies and resources that build on the strengths of children with SEND/ disadvantaged and remove barriers to learning.</i> <u>Communication and Interaction-</u> ➤ Vocabulary is reflected on the working wall and is to be referred to as a resource to support the children. ➤ Subject specific vocabulary can be shown on a word mat with pictures. <u>Cognition and learning</u> ➤ Scaffolding ➤ Concrete resources followed by pictorial representations. ➤ Short input including an 'I do, you do' approach. <u>Social, Emotional and Mental Health</u> ➤ Allowing children to have brain breaks. ➤ Using the 'not yet Yeti' <u>Physical and Sensory Needs</u> ➤ Providing 1 set of concrete resources in containers. <u>Challenge</u> <i>At St Gabriel's we believe every child needs to opportunity to succeed, therefore we teach to the top and scaffold the work to support the children meeting the end outcome.</i> <i>We provide challenge by using open ended investigations and providing work that requires transferrable skills. Additional resources can be used to challenge learners such as NRICH, ready to progress examples, twinkl, classroom secrets etc</i> <u>Catch up / interventions / Cumulative dysfluency / Addressing gaps</u> <i>We use IDL maths to address the gaps in the children's learning as well as post teaching.</i>
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IMPACT	Review and Assess Assessment for Learning	<u>Questioning</u> During teacher input, the teachers are to ask a variety of closed and open questions. Closed questions allow the children to draw upon their declarative and procedural knowledge. Open ended questions allow the children to draw upon their conditional knowledge where they are able to explore the structure of maths, deepen their understanding and make links with their learning. <u>Review of learning</u> ➤ Before teaching a concept, the children are to complete a pre assessment. Teachers are to use this assessment to inform their teaching and planning to address gaps in their learning and address misconceptions. ➤ At the end of the concept, the children are to complete a post assessment. Teachers are expected to use this to address any further gaps in their learning and use this to inform their teacher judgement whilst completing target tracker. <u>Feedback to improve</u> ➤ Verbal feedback to be provided whenever necessary in maths so any misconceptions are addressed. ➤ Our marking to improve policy ensures the children have the opportunity to correct their answers or deepen their understanding through a further challenge.
	Summative assessment	At the end of every term Year 1-6 complete the PUMA assessments. The teachers are to then input the standardised score on target tracker.
OTHER	Culture	Love of Maths flourishes throughout school by: • Enrichment opportunities • Engagement opportunities • Home learning for example TTRockstars • Promotion of maths badges
	Wider curriculum opportunities / Cultural capital	Wider curriculum opportunities- ➤ Science- statistics ➤ Computing- coding Language is a huge part of maths. We use sentence stems to support the children with their mathematical thinking and reasoning.
	Reading within the Curriculum Area	The school is continuing to develop the quantity of fiction books available that are focused around an area of mathematics.
	Related Policies	• Handwriting and Presentation • Feedback and Marking to improve • Teaching and Learning • Assessment • Calculation policies- addition, subtraction, division, multiplication, EYFS