

St Gregory's C of E Primary School

Maths Mission Statement



Our Maths Curriculum Intent

At St Gregory's Primary School, we recognise the exciting and crucial role that maths plays in our everyday lives. It builds the foundations which enables pupils to engage with science, technology and engineering, the world of finance and most forms of employment. 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 maths and a sense of enjoyment and curiosity about the subject.

At St Gregory's it is our intent that all children:

- **Become fluent** in the fundamentals of mathematics, including varied and frequent practise with increasingly complex problems over time.
- Develop their **conceptual understanding** and ability to recall and apply knowledge rapidly and accurately.
- **Reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing and argument, justification or proof using mathematical language.
- To **solve problems** by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Our Maths Curriculum Implementation

What the planning looks like

At St Gregory's, in the foundation Stage, lessons are planned in accordance with the Development Matters Mathematics with children working towards Early Learning Goals of number and numerical pattern.

From Years 1 to 6, all lessons follow the small mastery steps of the White Rose program. Maths lessons are planned by the class teacher with the maths subject leader overseeing the implementation and monitoring the impact of learning. All plans are in accordance with the new National Curriculum objectives, to ensure continuity and progression throughout the school, and are differentiated to meet the needs of all learners. Links between Maths and other subjects are highlighted such as science, art and IT. Weekly homework is sent home to support the children to consolidate the knowledge and skills learnt in school. Times table Rockstars is also used to support our times table development and the school has regular competitions.

Maths lessons are carefully planned to contain the following elements:

- times tables or counting
- fluency of arithmetic questions and consolidation of previous learning
- maths displayed with in real life contexts
- discussion
- paired practise
- direct teaching and modelling
- practical tasks
- reasoning and problem solving
- recording based upon fluency, representation and structure, variation and mathematical thinking
- reflecting and evaluating

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At St Gregory's we have a growth mindset culture where everyone has a 'can do' attitude built upon determination and resilience. Children who require additional support in the learning of mathematics will receive one or more of the following in addition to the quality first teaching practise:

- targeted intervention to address a particular need
- pre or post teach with the class teacher
- additional support in lessons

Teachers take account of the three principles of inclusion that are set out in the National Curriculum:

- setting suitable learning challenges
- responding to the diverse learning needs of pupils
- overcoming potential barriers to learning and assessment for individuals and groups of pupils

What the teaching looks like

In the Foundation stage, maths exploration is an integral part of the Early Years Curriculum and teachers support children to make sure links are made to other subjects so that pupils can start to develop and apply their maths skills. Teachers plan activities around the use of manipulatives to enable children to make and explore numbers and allow children to work in a thematic approach where possible to support development.

The use of concrete manipulatives is encouraged through out the school to help all children to explore maths and cross curricular links are made where possible. All year groups have 5 lessons of maths per week and as a core subject, it is taught in the morning.

In maths lessons teachers focus on introducing the learning in context. Children then have the ability to apply previous learning and build upon their knowledge through teachers careful questioning. Teachers encourage children to share ideas and explain why and how they came to their answer.

Maths lessons follow the below structure across all year groups:

- Daily counting, times table practice or flash back 4
- In focus task to explore previous learning
- New learning
- Independent work relating to the new learning
- Deepening question to further extend children's' thinking and understanding
- Reflection, where children evaluate their learning

Children record their work in their maths books demonstrating fluency, a variety of representations and mathematical thinking, reasoning and problem solving.

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Our Maths Curriculum Impact

What the learning looks like

In all lessons, children follow the mastery approach and each lesson is closely linked to one or more of the small steps in learning. The core learning is gained through a question presented in a context and the children work in paired and guided work to develop a secure understanding of the knowledge. Children are regularly asked how, why, what if, what do you notice, to encourage them to explain their reasoning. When discussing calculation children are asked to explain which method they would use (bridging, adjusting, reordering, near doubles, counting on and back, partitioning, formal method) and why.

Children start each lesson either by counting in multiples or jumps forwards and backwards, times tables games and activities, recall of number facts, all to develop a fluidity with number. Following this, they will then be asked to tackle an in focus task which consolidates their previous learning. Children will then be presented with their new learning and work with partners to solve it. They respond to teacher questioning and share thinking and understanding with their peers allowing all children to learn from each other and refine their thinking. Independent practise then allows children to work through a task on their own and apply the skills learned. The following deepening questions enable children to further develop their conceptual understanding and often involve a reasoning or problem solving focus. Finally, children will reflect upon their learning explaining what they can now do that they couldn't at the beginning of the lesson or what they can do but what they still need to work on.

What assessment looks like

In maths, teachers use multiple assessment for learning opportunities to adapt teaching immediately to suit the needs of the class. Teachers use differentiated questioning and assessment for learning strategies to help all children to master the curriculum and change the direction of learning to suit all children. The White Rose steps are followed with a degree of fluidity to enable all teachers to spend additional time on a step if assessment for learning shows this is needed. Same day intervention is put into place to address a misconception from the previous lesson.

At the end of the lesson, teachers will assess the children's work and further tailor planning to suit the individual needs of the children. If children are not ready to move on, immediate intervention is put in place. This may be in the form of a pre or post teach: a catch up intervention with the class teacher or TA: a supported group in a follow up lesson. Whole classes can stay on the small step for a larger duration of time should this be required. This prompt intervention ensures that all children are ready to progress. Teachers ongoing assessment allows them to accurately adapt learning to suit the needs of all children. This means that all children should have a starting point relevant to their individual needs.

Formal assessment takes place at the beginning of each unit in the form of an elicitation exercise. At the end of the unit, children use the White Rose assessment to show progress and identify any conceptual misunderstandings. This allows precise intervention to be put in place to support when necessary.

Termly progress tests are completed using PUMA tests. Children undertake these in test conditions and their standardised scores are recorded on INSIGHT tracker. Gap analysis is conducted to ensure targeted interventions can be set and teachers can adapt planning to ensure pupils needs are met. In addition, teachers assess pupils based on their scores and work in books. Children will be assessed as well below, just below, at age related expectations, greater depth (above age related expectations). Children who are achieving above the national level for their age may be identified as greater depth and in years 4, 5, and 6 attend a GD maths group to ensure they are challenged and inspired by the maths they do.

In Early Years Foundation Stage observational assessments are completed throughout the year and an on-entry number assessment takes place to assess learning in order to personalise the curriculum.

