Mathematics

Intent, Implementation, Impact Statement

	Key Points

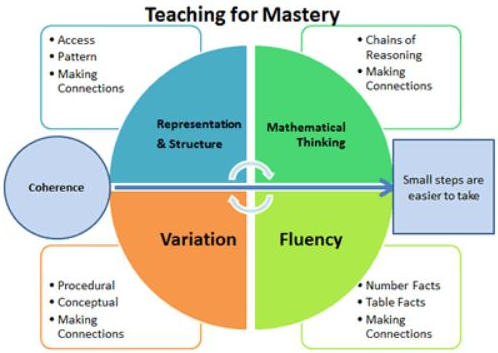
Our Intent	At Griffe Field Primary School, we aim that all our children develop an **enthusiastic** and **positive** attitude towards mathematics, and are able to **succeed** and **develop their skills** as they move through the school. We aim for our children to recognize themselves as Mathematicians through a preserving mind - set and recognise that maths is an integral part of their world.
	
	Our Aims:
	
	• To meet the aims of the National Curriculum to ensure all pupils:
	  ○ Become **fluent** in the fundamentals of mathematics
	  ○ **Reason mathematically**
	  ○ Can **solve problems** by applying mathematics
	• To deliver activities that meet the requirements of the National Curriculum, in a way that is appropriate to the needs and interests of all pupils and which challenges them to fulfil their potential.
	• To provide experiences to children in the Early Years Foundation Stage relating to Mathematics that meet the objectives laid out in the Early Learning Goals and from the March 2021 EYFS Framework
	• To foster a positive and "can do" attitude to mathematics.
	• To develop competence and confidence in mathematical knowledge, concepts and skills.
	• To develop ability in problem solving, reasoning and to think logically, working in a systematic and accurate manner.
	• To enable pupils to use their initiative and develop an ability to work independently and collaboratively.
	• To promote the ability to use mathematics as a means of communicating ideas.
	• To embed a deeper understanding of mathematics through a process of enquiry and investigation.
	• To develop the ability to apply knowledge, skill and ideas in real life contexts, outside the classroom and become increasingly aware of the uses of mathematics in the wider world.
	• To promote the ability to use and apply mathematics across the curriculum in a creative manner.
	• To develop an awareness of the importance of mathematics in everyday life.
	• To develop the key skills relating to mathematics including:
	  ○ Communication
	  ○ Application of numbers
	  ○ Working with others
	  ○ Problem-solving
	• To build up their cultural capital in mathematics by providing knowledge and understanding of financial maths, teaching children explicitly about interest rates, shares and banking system in order for them to become educated citizens.

Our Implementation

At Griffe Field our mathematics teaching places emphasis upon a mastery approach, building flexible learners with a true depth of understanding of each mathematical strand and concept.

<u>Teaching and Learning:</u>

- The National Curriculum is used as the basis for our mathematics programme of study alongside with White Rose scheme, NCETM, My Maths, Timestables Rockstars and NRich resources to develop a deeper understanding of the concepts taught.
- Mathematics is taught daily in EYFS, KS1 and KS2, through whole class teachings, group and individual work, and investigative approaches.
- Application of skills are linked across the curriculum where appropriate.
- Mathematics lessons are designed with a concrete, pictorial and abstract (CPA) approach, providing pupils with the scaffolding required to access the learning at all levels
- Teachers implement the school's agreed Calculation policy for progression in written and mental calculations.
- The Five Big ideas underpin teaching for mastery in our school



- Mastery and deeper understanding is interwoven throughout each lesson using a variety of question types, developing fluency, reasoning and problem solving.
- We identify those children who flourish in maths and offer additional challenges and opportunities to deepen their understanding of the subject.
- All children have a login in for 'My Maths' and 'Times tables Rock Stars' - these are used in a variety of ways across school: to give children an opportunity to practise their fluency and mental recall skills through games approach; completing tasks that follow up from what they are learning; and set activities for home learning.
- Use of a range of resources, outdoor learning spaces, information technology and cross - curricular links are used to stimulate and support maths learning across all Key Stages.

<u>Inclusion and Wider Engagement</u>

- All learning and activities are planned to be accessible to *all* learners, including SEND, gifted and talented, and other varying abilities. This is achieved through Quality First teaching, Early Identification and intervention for pupils who require additional support to succeed.
- Additional enrichment is provided through: theme days/weeks within school, cross - curricular activities, after school maths club, access to regional or national competitions and outside providers delivering workshops/ assemblies (including STEM providers). These are made accessible to all ages and abilities.
- Protected characteristics are to be considered at all times during the planning of the Maths curriculum.
- Pupils who are not making adequate progress are given extra support and interventions in order to assist them in meeting their full potential.

The Impact

At Griffe Field, it is imperative that all children have a secure understanding of each mathematical concept before moving on. We ensure that the children have mastered the maths in every lesson by using assessment for learning, identifying and addressing any misconceptions as and when they arise. Where possible teachers and teaching assistants deliver targeted focus groups, intervention and boosters based on the assessment of the work produced to ensure children are ready to move on. The expectation is that the majority of children will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly are challenged through by being offered rich and sophisticated problems before any acceleration to new content. They become true masters of content, applying and being creative with new knowledge in multiple ways. Children who are not sufficiently fluent will consolidate their understanding through additional support. Each year group have defined endpoints that all children are expected to achieve which is in line with the National Curriculum and results in increasing proportions of pupils attaining the age – related – expectations or better whilst making good progress.

As well as assessment for learning during the lessons, regular and ongoing assessments of the pupils' outcomes, informs teaching, as well as intervention, to support and enable the success of each child.

<u>Pupil Assessment and Attainment</u>

- Formative assessment are an informal part of every lesson to assist in ascertaining pupils' understanding and give teachers information to assist in the adjusting the day-to-day lessons and lesson plans. During lessons, the use of questioning, observations, discussions and marking is a key part of formative assessment.
- Pupils self- assess their own learning using a traffic light system within their maths books.
- Summative assessments involve using the schools 1-6 banding and CAP files to identify children's attainment during the year. This supports teacher assessment as well as the Subject Leader's and SLTs monitoring of data to aid in planning for development of the subject and whole school targets.
- Summative assessments take place in the Autumn term, Spring term and Summer term using Rising Stars - NTS termly progress assessments to measure and predict pupils' progress against National Curriculum objectives for their year group.
- Outcomes of these assessments are recorded using MARK assessment tool to analyse individual, group and school performance.
- Attainment and progress is also tracked using O Track and FFT
- Pupils' progress and attainment is discussed in Pupil Progress meetings.
- In EYFS, children's achievements are on-going and are assessed against the Early Learning Goals.
- Pupils working significantly outside of their year group's expectations complete assessment for the year group they are working closest to.

<u>Mathematics Subject Area and School Improvement Plan</u>

- Subject leaders measures impact of the implementation through monitoring activities, including: learning walks, questionnaires to staff and pupils, pupil voice, looking at evidence of pupils' work, teachers' planning, analysis of teacher's assessments (including CAP files, test scores, teacher assessments), and any other relevant evidence.
- Subject leader evaluates the impact and plans for future development of the subject for pupils and staff.
- Subject leader creates action plan, looking to develop new opportunities, refine current practice, plan CPD for staff and feed into the School Improvement Plan (where appropriate).

<u>Overall Intended Impact</u>

- Maths is engaging and enjoyable for all pupils; they develop a positive can do attitude towards Mathematics.
- Children experience the beauty, power and fun of mathematics developing a sense of curiosity about the subject and recognising it as a key life skill.
- Teachers have the confidence and knowledge to deliver a well - planned and interesting curriculum to pupils using a range of resources and approaches.
- Pupils make good progress in their acquisition of skills, knowledge and understanding.
- Children feel empowered to pursue Mathematics and STEM subjects as a potential career path, regardless of gender, ethnicity, socio-economic backgrounds etc
- Children access a range of different learning opportunities, both in and out of the classroom.
- Staff evaluate the impact of their teaching and learning and develop their practice to suit the learners in their classroom.
- Subject leader can identify strengths and areas for development of the subject and act upon it in the interest of the school.