

Maths Policy

Great Ponton CE Primary School



Approved by:

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'Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy 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 mathematics, and a sense of enjoyment and curiosity about the subject.'

The National Curriculum in England, Key stages 1 and 2 framework document, September 2013

INTENT

At Great Ponton CE Primary School, we want to inspire, nurture and grow mathematical minds. We want our children to develop as mathematicians where they see mathematics as being relevant to their world, applicable to everyday life and important for their future education and careers.

We value every pupil and the contribution they each have to make. As a result, we aim to ensure that every child acquires the intended knowledge and skills through a coherently planned and sequenced inclusive curriculum appropriate for their age. The Mathematics curriculum is ambitious for all children, building upon what children know and can do, enabling them to develop the mathematical skills they need to succeed in the next stage of learning. The Mathematics curriculum is designed and delivered in a way that allows children to transfer key knowledge to long-term memory. It is sequenced so that new knowledge and skills build on what has been taught before and children can work towards clearly defined end points.

The purpose of mathematics in our school is to develop:

- foundational knowledge, particularly proficiency in number, to give pupils the ability to progress through the curriculum;
- unconscious competence and confidence in mathematical knowledge, concepts and skills;
- an ability to communicate, read, write and apply mathematics;
- an ability to use and apply mathematics across the curriculum and in real life;
- resilience to solve problems, to reason, to think logically and to work systematically and accurately;
- a positive attitude towards mathematics and an awareness of the relevance of mathematics in the real world;
- initiative and an ability to work both independently and in cooperation with others;
- an understanding of mathematics through a process of enquiry and experiment.

IMPLEMENTATION

At Great Ponton CE Primary School, **staff** will:

- have sufficient mathematical and teaching content knowledge to deliver topics effectively;
- plan and deliver learning in manageable steps where core concepts build seamlessly in knowledge acquired in previous phases;
- plan opportunities to revisit previously learned knowledge, concepts and procedures;
- be flexible with planning so that they can address identified gaps in children's mathematical knowledge that hinder their capacity to learn and apply new content;
- model new procedures and use resources and approaches that enable children to understand the mathematics they are learning and make independent choices regarding when and what to use;
- provide opportunities for concrete – pictorial – abstract (CPA) representations as children learn and secure a conceptual understanding;
- support children in developing fluency, and not simply memorising facts, so that they can unconsciously apply their knowledge as skills;
- identify opportunities for reasoning and problem solving in all areas of mathematics regardless of age or ability, allowing children to make connections;
- create an environment that supports the intent of our ambitious curriculum;

- promote a confident, positive attitude towards the learning and use of Mathematics making it an enjoyable experience;
- encourage children by believing that every child, with hard work, can be good at Mathematics;
- support parents and carers in being actively involved in their child's maths education.

At Great Ponton CE Primary School, we aim to ensure that all **children** will:

- become numerically proficient;
- become fluent in the fundamentals of mathematics and embed these in their long-term memory;
- reason mathematically;
- solve problems by applying their mathematics to a variety of routine and non-routine problems;
- develop an enjoyment of learning through practical activity, investigation, exploration, challenge and discussion;
- appreciate and understand the importance of Mathematics in everyday life;
- foster positive attitudes towards Mathematics.

In Mathematics **Teaching and Learning** will:

- provide children with a minimum of a discrete one-hour maths lesson per day which will be inclusive to all children and take account of their differing needs;
- offer daily opportunities for counting forwards and backwards;
- encourage mathematical talk including the use of correct vocabulary;
- use a variety of teaching and learning styles in lessons;
- use the principles and aims of the National Curriculum for Mathematics 2014 at the heart of mathematics teaching and learning and teachers will follow a carefully sequenced long-term plan for mathematics ensuring equal coverage of the National Curriculum in Years 1-6;
- expect teachers to make short-term plans appropriate for the differing needs of their class whilst ensuring all children have access to achieving their age-related expectations;
- EYFS will follow the September 2021 framework ensuring children develop a strong grounding in number, spatial reasoning, pattern and relationships;
- ensure EYFS children learn through a mixture of adult-scaffolded activities and child-initiated activities both inside and outside of the classroom;
- ensure staff teach written calculation in-line with Jenny Cook's 'A Journey To Written Calculation' – all staff will have engaged in training during Autumn 2022 and any new staff will be trained accordingly;
- encourage children to consider if the mathematics can be done mentally before resorting to a written method;
- require support staff to work under the direction of the class teacher;
- promote a conceptual understanding through the provision of concrete – pictorial - abstract representations;
- teach children a variety of methods for recording their work, encourage and help them to use the most appropriate and efficient method of recording;
- not require children to record anything in their books when lessons are purely practical, however the learning journey will be evident in teacher's planning and annotations;
- identify rapid intervention needs as part of teaching and learning and act swiftly to ensure security of pupil's understanding and readiness to progress;
- challenge children who grasp concepts rapidly through deep and rich learning opportunities before pace through the curriculum – 'depth before pace';
- look for opportunities for use and application of mathematics outside of the discrete lesson;
- link skills across the curriculum where appropriate.

In Mathematics **Assessment** will:

- support the teaching, determining what children know, understand and can do so that all teaching meets the differing needs of all children;
- identify learners who may need early help and learners who need challenge;
- check that children embed and use knowledge fluently and flexibly, evaluate the application of skills and/or check for understanding to inform teaching;
- not be used in a way that creates unnecessary burdens on staff or children;
- make assessments, through Mastery Checkpoints, of prior learning to check that all children have gained the intended understanding and unconscious competence in knowledge, concepts and procedures taught and that these are secured in long-term memory – Can the children do more? Do the children know more?;
- make diagnostic assessments, through Mastery Checkpoints, of future learning objectives (next week) to check that all children have firm foundations in place and are ready for the next stage in learning;
- make regular use of teacher reflections to support teacher workload whilst being effective in moving learning forwards. The assessments are used to inform groupings, plan next steps and adapt teaching and learning considering how to address gaps in pupils' knowledge and skills and how to offer opportunities for deeper thinking;
- ensure support staff feedback observations / assessments to the class teacher immediately after or during the session;
- provide written or oral feedback, work does not necessarily need to receive narrative marking; sometimes flash marking, acknowledgement marking, short, challenging comments or oral feedback will be more effective;
- ensure marking will distinguish between a pupil's simple slip and a misconception that reflects a lack of understanding. Where slips occur, teachers will encourage children to correct them using a dot. Where misconceptions appear, teachers will identify them using →. Teachers may decide to take alternative course of action for misconceptions. For instance, with a small number of children, the teacher may arrange same-day intervention whilst for a large number of children, the errors will be addressed in the next lesson;
- require children to self-assess each piece of learning through a traffic light (written work) or a thumb (practical work);
- use formal testing in KS1&2 on three occasions over the academic year using the NfER assessments or the STA KS1/2 Tests. Results are reported on Insight Tracker and used to inform discussions at Pupil Progress Meetings including decisions regarding intervention groups;
- use the Early Learning Goals in the Early Years during the summer term;
- ensure summative teacher assessments are used at the end of Key Stage 1 in line with statutory guidance;

IMPACT

The mathematics subject leader and other senior leaders will monitor and evaluate the quality of mathematics education. A Monitoring and Evaluation Plan will be used to guide actions whilst being mindful of teacher wellbeing. All actions will be evaluated, and any feedback shared with the appropriate person whilst considering next steps. A named governor will also liaise regularly with the subject leader in order to review and oversee Maths provision in school.