Braishfield Primary School Maths Policy

*At Braishfield Primary School, our **Purpose** is to **help every child grow** to be the best version of themselves that they can be. By educating each child emotionally, physically, spiritually and academically, we will prepare them for their future. In doing this, we will equip our children with the life skills to become confident, caring citizens who can play a positive and active role in modern society.*

*Our **Vision** for the school is a positive, nurturing and happy school community, based on **kindness, honesty** and **respect** for ourselves, each other and for our environment. We will all strive to be successful lifelong learners by developing **inquisitiveness, independence, collaboration** and **resilience**. We will all strive for excellence in everything that we do. We will all be brave, resilient learners, prepared to take learning risks and learn from our mistakes.*

Introduction

The purpose of this policy is:

- to ensure consistent high-quality teaching of Maths across the school which secures and embeds the knowledge, skills and conceptual as well as procedural understanding to enable pupils to attain highly and which prepares them for secondary school or their next stage of learning.
- to ensure that a Maths curriculum is delivered for all pupils that (1) is rich, exciting and balanced with opportunities to apply learnt knowledge and skills, (2) is relevant with practical context, wherever possible (3) is differentiated to enable all pupils to make good progress and attain well, (4) gives opportunities for over learning, recall of prior knowledge and deepens their understanding of concepts.

EYFS Framework

Work undertaken within the Foundation stage is guided by the requirements and recommendations set out in the Early Years Framework. All children are given ample opportunity to develop their understanding of mathematics. Children use concrete and pictorial representations to develop an understanding of mathematics. Children are encouraged to use, enjoy, explore, practise and talk confidently about mathematics using reasoning. The children are exposed to problems and use practical resources like Numicon, ten frames and other concrete materials to master key concepts.

The National Curriculum

The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language

- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils 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 should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

By the end of Key Stage 2 we aim for Braishfield pupils to be fluent in the fundamentals of mathematics, with a conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. They will be able to use a range of models and representations and reason about mathematically in order to justify and explain their strategies and approaches. Braishfield pupils will be able to independently solve a range of problems, including those in unfamiliar contexts and in real-life scenarios, which will support them in the wider world.

Planning and Teaching

EYFS

EYFS follow the White Rose maths scheme. Children in Early Years will be given lots of opportunity to explore maths through adult led activities and independent learning. They will use a range of concrete resources and pictorial representations to explore different concepts.

Key Stage One and Key Stage Two

Maths planning will follow the Hampshire Assessment Model (HAM) cycle and the HAM Milestones. SEND, PP and targeted children will be highlighted on all plans and there will be a clear progression of skills within the topic. Opportunities to support and challenge children will also be included in the plan. Planning will follow a Concrete, Pictorial, Abstract (CPA)

approach and will include opportunities for children to practise fluency, problem solving and reasoning and represent these using a range of models and images.

Before each new topic, a **pre-assessment** is to be completed by the whole class which will assess their recall of prior knowledge of this topic area. It may also contain a few questions linked to the new learning.

Teaching is to be differentiated, to ensure all gaps in knowledge are filled. Equipment will be made accessible for children to use to develop, secure and deepen their understanding of concepts. Children will be encouraged to move their learning on through use of marking stations and next tasks. Their learning will be deepened through *What if...?* statements, reasoning, problem solving and investigations. They will be encouraged to PROVE how they know an answer and show this in different ways.

Children will be encouraged to reflect on their learning during and at the end of the lesson. On some occasions children will reflect on their learning, writing a comment or an example in their book using purple pen.

Concrete, Pictorial, Abstract

All children are to have a concrete understanding of what they are actually doing, before moving on to pictorial or abstract concepts. All new concepts should be modelled using concrete resources. When moving on, concrete resources should be used alongside pictorial representations until children are happy with pictorial. Likewise, pictorial representations should be used alongside abstract until child is confident. Some children may need to use concrete resources or pictorial representations throughout the topics learnt.

Expectations in books

Children are to take pride in their books, driven by the high expectations of Teachers and Learning Support Assistants. They are to ensure that their presentation and handwriting within Maths are of a high standard.

Book format and presentation for each topic should be as follows:

- Pre-assessment evident.
- At the beginning of each session, all children should write the short date and underline with a ruler.
- The topic should then begin with the learning objective stuck or written into their book.
- All writing by children in their Maths books must be in pencil, all editing and responding to be done in purple pen.
- Children in KS2 should draw a margin with a pencil and a ruler on each new page they write on.
- Rubbing out should be discouraged. Any errors within calculations should be crossed out with one line to reinforce that 'mistakes' are part of their learning journey.
- Jottings and mental maths to be completed in orange jotter books.

Marking and Responding

Marking is to be completed by the next teaching session or 'live' in the lesson, allowing any regrouping of children and/or targeted teaching to be organised. Feedback marking should be used to support or enhance children's learning. Verbal feedback is an important part of teacher/pupil interaction and VF will be written where immediate verbal feedback has been given.

Children to be given time at the start of each teaching session to respond to any marking and feedback (e.g. any corrections, answering developmental questions written by teachers). This must be done in purple pen. Children should also use their purple pen to reflect on their learning.

Classroom Maths Display Boards

The Maths display boards within the classroom are to be accessible to, and useful for, children during each session. Walls should not be overloaded. They should include:

- Visual images/models to support conceptual understanding
- Modelled methods.

Multiplication Tables

According to the National Curriculum, children are to be able to recall and use multiplication and division facts for the following multiplication tables at the end of the below year groups:

- Year 2: 2s, 5s, 10s
- Year 3: 2s, 5s, 10s, 3s, 4s, 8s
- Year 4: 2s, 5s, 10s, 3s, 4s, 8s, 6s, 7s, 9, 11s, 12s

Multiplication Tables Checks and opportunities for recall will be made regularly throughout Year 2, 3 and 4 to support gaps in learning.

Role of the Maths Subject Leader

- To lead the development of Maths throughout the school.
- To monitor the planning, teaching and learning of mathematics throughout the school.
- To help raise standards in maths.
- To provide teachers with support in the teaching of mathematics.
- To provide staff with CPD opportunities in relation to maths within the confines of the budget and the School Improvement Plan
- To monitor and maintain high quality resources.
- To keep up to date with new developments in the area of mathematics