St. Catherine's C of E Primary School
Mathematics Policy

Introduction:

This policy outlines the teaching, organisation and management of mathematics taught and learnt at St. Catherine's School. The policy is based on the 2014 expectations and aims of the National Curriculom for mathematics and the Early Years 'Development Matters' EYFS document. This ensures continuity and progression in the learning and teaching of mathematics.

Purpose:

Mathematics is a creative and highly interconnected 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 all forms of employment. A high-quality education in maths 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.

Aims:

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 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.

Planning

Teachers use the White Rose scheme of learning as the basis for their planning. This is supplemented with other resources and in particular: Ready to Progress, KIRFs, TestBase, Daily Maths and TTRS. White Rose pre and post units assessments are used and termly NTS standardised assessments are used.

Information and communication technology (ICT):

Calculators should not be used as a substitute for good written and mental arithmetic. They should therefore only be introduced near the end of key stage 2 to support pupils' conceptual understanding and exploration of more complex number problems, if written and mental arithmetic are secure. Teachers should use their judgement about when ICT tools should be used.

Spoken language:

The national curriculum for mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Early years:

Work undertaken within the Foundation Stage is guided by the requirements and recommendations set out in the Early Years 'Development Matters' EYFS document. All children are given ample opportunity to develop their understanding of mathematics. Lessons in the Early Years aim to do this through varied activities that allow children to use, enjoy, explore, practice and talk confidently about mathematics.

Progression of calculation methods:

We have a policy for progression in calculation methods to ensure continuity and consistency throughout the school.

Leadership and Management

The subject leader's role is to empower colleagues to teach maths to a high standard and support staff in the following ways:

- By keeping up to date on current issues: disseminating information and providing guidance and training for staff members (either directly or through other professionals)
- Leading by example / modelling lessons or styles of teaching
- Having a knowledge of the quality of mathematics provision across the school
- Monitoring expectations, provision and attainment across the school and providing feedback to develop practice further in order to raise standards.
- Provide necessary equipment and maintaining it to a high standard.

Differentiation and support: (Including provision for SEND, G&T, EAL, and PPG pupils)

This is incorporated into all mathematics lessons and is done in various ways, such as:

• setting challenging age-related knowledge, reasoning and problem solving tasks based on systematic, accurateassessment of pupils' prior skills, knowledge and understanding;
• small, differentiated target steps for all children to move through at a pace that suits their needs;
• timely support and intervention; systematically and effectively checking pupils' understanding throughout lessons;

• ensuring that marking and constructive feedback is personal, frequent and of a consistently high quality - enabling pupils to understand how to improve and develop their work - with planned in time for children to respond to feedback;

• real life, practical links throughout all knowledge, reasoning and problem solving tasks, with whole class activities planned at the end of each unit;
• range of practical-real life resources used to support all stages of learning within the class;
• regular homework set- differentiated accordingly
• intervention programmes/extra teacher support delivered where needed both in class and through extra sessions planned outside the sessions;
• visual stimulus/aids are provided for our hearing impaired and English as additional language pupils. Specialist support staff are also employed to develop and target these pupils further.

Marking and Feedback:

The main purpose of our marking policy is to ensure that as children progress through the school they benefit from constructive guidance and next step questioning to challenge and consolidate their learning further

Assessment:

Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class. This is mainly achieved through mini-plenaries, questioning, marking, T.A feedback and pupil self-assessment. Pupils are more formally assessed at the end of each unit and the end of each term.

Monitoring and Review:

The monitoring of the standards of children's work and the quality of learning and teaching mathematics is the shared responsibility of the S.L.T and the subject leader. The work of the subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. A named member of the school governing body is briefed to overview the teaching of mathematics in the school.

Reviewed: Annually