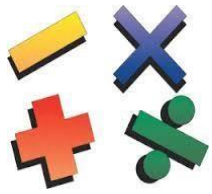
Shawlands Primary School



Mathematics

Maths Policy

2023-2024

SHAWLANDS PRIMARY SCHOOL

BETTER TOGETHER

Maths Policy

Our Vision:

Through a positive caring environment, we provide the opportunity for every child to reach their full potential and ensure all children are ready for their next steps.

Rationale:
Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways.

Mathematics is important in everyday life. It is integral to all aspects of life and, with this in mind, we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them.

The National Curriculum order for mathematics describes in detail what pupils must learn in each year group. This ensures continuity and progression and high expectations for attainment in mathematics.

It is vital that a positive attitude towards mathematics is encouraged amongst all of our pupils in order to foster confidence and achievement in a skill that is essential in our society. At Shawlands we use the National Curriculum for Mathematics (2014) as the basis of our mathematics programme. We are committed to ensuring that all pupils achieve mastery in the key concepts of mathematics, appropriate for their age group, in order that they make genuine progress and avoid gaps in their understanding that provide barriers to learning as they move through education. To help children reach mastery, we use Deepening Understanding/PlanPanion as a resource, along with other online resources and teacher made resources. Assessment for Learning, an emphasis on investigation, problem solving and the development of mathematical thinking and a rigorous approach to the development of teacher subject knowledge are therefore essential components of the Shawlands Primary approach to this subject.

Aims
We aim to provide the pupils with a mathematics curriculum and high quality teaching to produce individuals who are numerate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating environment and adequate resources so that pupils can develop their mathematical skills to the full.

Our pupils should:
• have a well-developed sense of the size of a number and where it fits into the number system
• know by heart number facts such as number bonds, multiplication tables, doubles and halves
• use what they know by heart to figure out numbers mentally
• calculate accurately and efficiently, both mentally and in writing and paper,
• drawing on a range of calculation strategies
• recognise when it is appropriate to use a calculator and be able to do so effectively
• make sense of number problems, including non-routine/'real' problems and identify the operations needed to solve them
• explain their methods and reasoning, using correct mathematical terms

• judge whether their answers are reasonable and have strategies for checking them where necessary
• suggest suitable units for measuring and make sensible estimates of measurements
• explain and make predictions from the numbers in graphs, diagrams, charts and tables
• develop spatial awareness and an understanding of the properties of 2d and 3dshapes

Provision
Pupils are provided with a variety of opportunities to develop and extend their Mathematical skills, including:
• Group work
• Paired work
• Whole class teaching
• Individual work including 1:1 interventions

Pupils engage in:
• the development of mental strategies
• written methods
• practical work
• investigational work
• problem solving
• mathematical discussion
• consolidation of basic skills and number facts
• maths games

We recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. We use accurate mathematical vocabulary in our teaching and children are expected to use it in their verbal and written explanations.

Mathematics contributes to many subjects and it is important the children are given opportunities to apply and use mathematics in real contexts. It is important that time is found in other subjects for pupils to develop their maths skills, e.g. there should be regular, carefully planned opportunities for measuring in science and technology, for the consideration of properties of shape and geometric patterns in technology and art, and for the collection and presentation of data in history and geography.

We endeavour at all times to set work that is challenging, motivating and encourages the pupils to think about how they learn and to talk about what they have been learning. Additional enrichment opportunities are provided for pupils to further develop mathematical thinking e.g. through cooking, music, and maths investigations and games.

To provide adequate time for developing mathematics, maths is taught daily and discretely. Maths lessons may vary in length but will usually last for about 45 minutes in Key Stage 1 and 60 minutes in Key Stage 2. Maths lessons are taught 4 times a week, with one lesson being a weekly skills test lesson. This allows for children to revisit previous learning as well as allowing for pre-teaching of future learning. A times table speed test is also delivered during this lesson to ensure that children are progressing within the times tables for their year group. This helps to prepare children for the Year 4 Multiplication Times Table Check.

At Shawlands, we believe that if firm foundations are established in key mathematical concepts then children are able to develop a deeper and more cohesive understanding of complex mathematics as they develop.

Our maths curriculum incorporates:

Declarative knowledge –the key facts relevant to the age/class/ ability of the children to enable them to succeed with the next steps in maths.

Procedural knowledge - clear methods and procedures (calculation policy)

Conditional Knowledge – exposure to problems and strategies for solving these and reasoning questions are explored in every lesson, applying both declarative and procedural knowledge.

Teaching Approaches
Teachers in straight and mixed age classes use a range of teaching strategies to engage the children in maths and ensure progress is made by all children within a class; no set formula is used. A typical lesson would include:

• Both teaching input and pupil activities,
• A balance between whole class, guided grouped and independent work, (groups, pairs and individual work) and practical work
• Effectively differentiated activities/objectives and appropriate challenge where appropriate.

Sometimes the focus for the session is new learning, at other times pupils may be practising, to master the application of a concept they have learned earlier. The focus of the session may vary for different children depending on their learning needs. Every lesson will ensure that previous skills are recapped/revisited, along with having a chance to problem solve/reason.

At times there may be opportunities to develop skills and understanding of mathematics through additional activities, some of which may take place at home. The school has invested in 'Mathletics' and 'Times Table Rockstars' websites which are accessible learning platforms that can be used to set differentiated homework for pupils.

Teachers plan learning that is differentiated to meet the needs of all pupils, whether they have a specific learning difficulty in maths or whether they are particularly able.

Inclusion

Teachers endeavour to deliver learning appropriately for high attaining, middle attaining and low attaining pupils – possibly with individual work for an SEN pupil at one end of the achievement spectrum, to individual work for a gifted pupil at the other. This is done by adapting the lessons so that the work is achievable for each child.

Target Setting

If the teacher feels it is needed, children can be set targets through feed forwards or during a lesson – these are usually short term targets that are met within that lesson or the next day. Longer term targets are given to children who may need to work on an overarching maths' skill e.g - number formations, number bonds.

Assessment
Formative Assessment
Teachers integrate the use of formative assessment strategies such as effective questioning,

clear learning objectives, the use of success criteria and effective feedback and response in their teaching.

Summative Assessment

Children in the Foundation Stage are assessed in accordance with the EYFS curriculum. In KS1 and KS2, children complete summative assessment tests. The data from these tests are inputted into SIMS. The school's progress tracking system SIMS is updated termly. National Curriculum tests are used at the end of KS1(now non-statuatory) and at the end of KS2. Teachers use past and sample papers to inform their assessments as they prepare pupils for these assessments. Year 4 access practise MTC tests every half term/term to ensure that they are prepared for the summative MTC in Summer term.

Early Years Foundation Stage (EYFS)

We follow EYFS curriculum guidance for Mathematics and also Mastering Number (NCETM). However, we are committed to ensuring the confident development of number sense and put emphasis on mastery of key early concepts. We ensure that children in EYFS are delivered a high quality curriculum to ensure that they are Year 1 ready.

Presentation and Marking

In KS1 and KS2, teachers are expected to adhere to the schools marking guide when marking books and presentation guide when guiding children as to how to present their work.

Resources

A bank of essential mathematics resources including Base 10, counters and dice are kept in a 'Maths goody box' in each classroom. Further resources relating to key whole school topics are kept in a central area in the main corridor.

Role of the Subject Leader

• Ensures teachers understand the requirements of the National Curriculum and helps them to plan lessons.
• Leads by example by setting high standards in their own teaching.
• Prepares, organises and leads CPD and joint professional development.
• Works with the SENDCO and Intervention Co-coordinator.
• Observes colleagues from time to time with a view to identifying the support they need.
• Attends CPD.
• Keeps parents informed about mathematics issues
• Discusses regularly with the Headteacher and the mathematics governor the progress of implementing National Curriculum for Mathematics in school
• Deploys support staff to address mathematics related needs within the school.
• Monitors and evaluates mathematics provision in the school by conducting regular work scrutiny, learning walks and assessment data analysis.