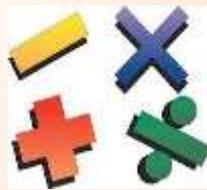




Shawlands Primary School



Mathematics Maths Policy

Miss Hargreaves

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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. Combined with the town Centre School's collaboration Calculation Policy, 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. 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 3d shapes

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 Numeracy 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.

Teachers plan problem solving and investigational activities every week to ensure that pupils develop the skills of mathematical thinking and enquiry.

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.

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.

Teaching Approaches

Teachers 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)
- effectively differentiated activities/objectives and appropriate challenge.

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.

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.

Teachers endeavour to differentiate 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 through the use of 'Chilli Challenge: 'Hot', 'Super Spicy' and 'Blow Your Mind'. The differentiated work is set out and children can then pick their own level of learning within a lesson to ensure they are accessing the appropriate level of work. Sometimes teacher intervention is required to ensure this; however, for the majority of time, children should be 'trusted' to pick the correct level for them.

During a lesson, children can choose to move up or down the levels if they need to – giving children ownership over their own learning.

Target Setting

If the teacher feels it is need, 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

Using half termly tests, pupils are assessed against NC levels every half term. The school's progress tracking system is updated termly.

National Curriculum tests are used at the end of KS1 and 2; teachers use past and sample papers to inform their assessments as they prepare pupils for these assessments.

All assessments and teaching informs teachers understanding of a child's ability in maths and this is recorded in an APP document.

The school's Assessment and Marking Policies inform high quality feedback and pupils' response to it in Mathematics.

Early Years Foundation Stage (EYFS)

We follow EYFS curriculum guidance for Mathematics. However, we are committed to ensuring the confident development of number sense and put emphasis on mastery of key early concepts. Pupils initially explore numbers to 20 and the development of models and images for numbers as a solid foundation for further progress.

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 for example 'Fractions' 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.