Shiplake C.E. Primary School
Memorial Avenue
Shiplake , Oxon
RG9 4DN
0118 940 2024
office.3810@shiplake.oxon.sch.uk

'I will instruct you and teach you in the way you should go; I will counsel you with my loving eye on you' Psalm 32.8

Maths Policy

Curriculum Intent

Mathematical thinking is an important discipline, which can be used to describe the world around us and can help us solve problems. Through application of mathematical skills and knowledge, we observe patterns, discover concepts and seek truth.

At Shiplake CE Primary School we have adopted a 'mastery approach' to the teaching of mathematics. Through this approach we intend to make the subject accessible to all pupils and allow them all to develop mathematical knowledge and skills. We introduce pupils to concepts in a logical progression while rigorously revisiting previously taught material to develop and secure pupil understanding.

Pupils are taught in whole-class settings, all working together on the same objectives and concepts. These are presented using a combination of concrete manipulatives, pictorial representations and abstract representations. In this way the 'ceiling' is removed from the children's progression as they are all provided with the same opportunity to develop their knowledge and understanding. For those who fail to grasp concepts or skills, classroom support and additional interventions are put in place to ensure pupils make the best progress that they possibly can.

Pupils hone their skills and consolidate their understanding by practising known skills and applying facts in a range of contexts. It is our intention that providing a variety of mathematically rich experiences will help develop the children's understanding of the elegance and beauty of mathematics and how its associated knowledge and skills are of great value.

It is our intention that our approach to the teaching of mathematics, will develop pupils' love of the subject and their appreciation of its value while removing the view that maths is something you 'get or don't get'.

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Aims

The aims of teaching mathematics at Shiplake CE Primary are:

- to develop a numerate environment where mathematical risk-taking, creativity and logical thought are encouraged in order to develop independent learners;
- to develop and consolidate basic mathematical skills and become numerically fluent;
- to promote confidence and competence with numbers and the number system;
- to develop the ability to solve problems through decision making and reasoning in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered, presented and interpreted;
- to explore features of shape and space and develop measuring skills in a range of contexts;
- to develop mathematical vocabulary and communication through speaking and listening, practical activities and recording work.

Organisation

Curriculum Time:

A one hour daily maths lesson is taught in key stage 1 and key stage 2. In the Foundation Stage children are introduced to short daily whole class teaching sessions. Key maths skills are then extended through child initiated activities and further small group sessions which are adult led.

Across the school there are also opportunities for cross-curricular links which provide work in other areas of the curriculum to support and reinforce children's mathematical learning.

Curriculum:

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The National Curriculum for Mathematics (Sept 2013) is the basis for implementing the statutory requirements for maths. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. To support the organisation of the school curriculum, Shiplake CE Primary uses the White Rose scheme of work. The White Rose scheme takes a mastery approach to the teaching of mathematics and it is for this reason it has been chosen.

The school also uses a variety of other resources to support the teaching of mathematics in all year groups. Teachers also employ a range of teaching styles and strategies to cater for different types of learners.

Maths is linked to other areas of the curriculum through a range of tasks and activities. This provides the opportunity to apply mathematical thinking and skills to a wider range of situations. Because of this, pupils reinforce their understanding of maths skills and knowledge playing an important part in succeeding in other areas of life, not just in the subject itself.

Mastery Approach

A mastery approach is defined by NCETM (National Centre for Excellence in the Teaching of Maths) as an approach to the teaching of mathematics which firmly rejects the notion that a proportion of people simply 'can't do maths'. Mastering maths means pupils of all ages acquiring a deep, long-term, secure and adaptable understanding of the subject. NCETM's explanation of a mastery approach is underpinned by five key ideas:

Coherence - Lessons are broken down into small, logical steps which allow access for all pupils while also building towards generalisation of the chosen concept.

Representation and Structure - Representations used in lessons clearly expose the mathematical structure being taught.

Mathematical Thinking – If an idea is to be fully understood, it should not be passively received. Instead it should be worked on, discussed and reasoned with.

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Fluency - Quick and efficient recall of facts and procedures that can be used flexibly and applied to different contexts is essential.

Variation – Teachers should represent concepts in more than one way in order to draw attention to critical aspects, and to develop deep and holistic understanding. Also, there should be variety in how learning is presented, allowing for pupils to identify similarities between mathematical relationships and structures.

Curriculum Progression

The White Rose scheme provides a logical, progression of concepts and resources to aide teachers in planning and teaching lessons. It is also flexible enough to allow teachers to facilitate pupil learning at a pace that is appropriate for each individual.

Decisions about when to progress should always be based on the security of children's understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly will be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently confident with earlier material will consolidate their understanding, including through additional practice, before moving on.

Marking of work

Children's work is marked according to the school's agreed marking policy.

Resources

Mathematical materials, equipment and basic resources are stored in a central place. The mathematics coordinator should be informed when equipment needs replacing or supplementing. The children are shown how to take care of equipment and resources and progressively encouraged to select materials suitable for the task in which they are engaged.

Calculators

Calculators will not be used as a substitute for good written and mental arithmetic. They will, therefore, only be introduced near the end of KS2 to

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support pupils' conceptual understanding and exploration of more complex number problems if written and mental arithmetic are secure.

Homework

Teachers set appropriate homework tasks on a regular basis.

Assessment, Recording and Reporting

Assessment takes place in line with the school's agreed assessment policy. Assessment is regarded as an integral part of learning and teaching and is a continuous process. Teachers assess children's work continuously through observations and marking. The results from formal assessments for each child are recorded and analysed termly. Each term pupil progress and attainment across the year groups and vulnerable groups are discussed and identified. Assessments are used to assess progress against school and national targets.

National tests in mathematics are used for Y2 and Y6 annually. As well as this the National Times Tables Check takes place in Y4. A summary of each child's attainment and progress in these assessments is reported to parents following statutory guidance either through parental discussion or end of year reports. Information is also passed onto the next teacher.

Monitoring and Evaluation

Teaching staff monitor their pupils through observation, discussion, teacher assessment, marking work and testing. The teaching of mathematics is monitored through:

- scrutiny of work;
- lesson observation/learning walks;
- discussion during staff meetings and INSET;
- tracking children's progress.

The headteacher and mathematics coordinator are responsible for monitoring progress in mathematics.

Inclusion

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All children have equal access to the mathematics curriculum. Our school strives to meet the needs of pupils with special educational needs, with disabilities, those with English as an additional language and those who excel in the subject. Further guidance can be found in the school's Inclusion Policy.

Health and Safety

Children are made aware of their responsibility regarding safe and sensible use of equipment. All equipment used is of a suitable nature e.g. no glass jars for capacity work.

Governing Body

The mathematics coordinator will encourage positive links with the Maths Governor to keep the governing body informed of all major issues related to mathematics in the school. The co-ordinator will report to governors when necessary to inform them of developments and progress within mathematics at Shiplake CE Primary School.

Reviewed November 2024 (AT)
3 year review cycle