

SHEFFORD LOWER SCHOOL MATHEMATICS POLICY



Rationale

At Shefford Lower School we know that all children can succeed in mathematics and we strive to equip children with the knowledge and skills to do this. We provide a high quality mathematics education to all children by delivering consistently rich and stimulating lessons and following our children's learning journeys closely. Lessons help children to develop systematic, adaptive and inquisitive minds that will best prepare them to tackle future challenges with confidence.

This policy should be read in conjunction with the:

- Calculation Policy
- Assessment and Reporting Policy
- Marking and Feedback Policy
- Learning and Teaching Policy
- Early Years Policy
- SEND (Special Educational Needs & Disabilities) Policy.

Aims

At Shefford Lower School we aim for both boys and girls of all abilities to:

- Enjoy maths.
- Develop the ability to think clearly and logically, with confidence, flexibility and independence of thought.
- Develop a deep understanding of mathematics through a process of enquiry and investigation.
- Develop an understanding of the connectivity of patterns and relationships within maths.
- Develop the ability to apply knowledge, skills and ideas of real life contexts outside the classroom.
- Develop an ability and inclination to work both alone and cooperatively to solve mathematical problems.
- Experience regular success.
- Be challenged.
- Ask questions as well as answer them.
- Be willing to make mistakes and learn from them.
- Use practical approaches and be able to choose their own resources, as required, to help them solve problems.
- Explain their methods and reasoning, using correct mathematical vocabulary.
- Use information technology to develop their maths skills.

Intended outcomes

Appropriate to their age and ability, children will:

- Have a well-developed sense of the size of a number and where it fits into the number system (place value).
- Know by heart number facts such as number bonds, multiplication tables, double and halves.
- Draw on a range of calculation strategies.
- Calculate accurately and effectively, both mentally and using written strategies.
- Make sense of number problems and identify the operations needed to solve them.
- Judge where their answers are reasonable and have strategies for checking them where necessary.
- Suggest suitable units for measuring; make reasonable estimates and accurate measurements.
- Explain and make predictions from the numbers in graphs, diagrams, charts and tables.
- Develop special awareness and an understanding of the properties of 2d and 3d shapes.

Learning and Teaching

The teaching of mathematics will be in line with Shefford Lower School's **Learning and Teaching Policy**. It will also be wholly compatible with the school's **aims** and **mission**. Mathematics is planned and taught in accordance with the Mathematics National Curriculum and the Early Years Foundation Stage Curriculum. Calculations are taught in line with the school's **Calculation Policy**. Years 1-4 follow the White Rose scheme which has the philosophy that 'Every child can succeed in maths.' It uses small manageable steps which should help the children understand concepts better and it has an integrated approach to fluency, reasoning and problem solving. Teachers may supplement these plans with rich activities, such as those devised by

'Nrich' for more able children. Reception classes follow a combination of Early Excellence, Big Maths and Explore Maths schemes to ensure the children have a thorough and varied maths experience.

General Classroom Practice

Teachers within each year group work together to plan for the classes they teach. These plans are used across the year group and are amended when necessary to suit the needs/wants of the children in each class. Planning should not be largely descriptive and does not need to be a "script" for how to deliver the lesson. We value a balance between consistency and necessary provision. Most lessons follow the format of a mental, oral starter, a main introduction and activity and a plenary, although there will often be mini-plenaries throughout the lesson. At least one session a week will be problem solving focused.

In each lesson all children know what they are learning (WALT) and the lesson is differentiated by 'steps to success' and a 'big question'.

Children in years 1 to 4 have the equivalent of one hour's maths lessons a day; this may include a double lesson at times, which means there are six hours of maths one week and four hours the next. Children in reception classes have at least 2 sessions of whole class maths teaching a week and then the opportunity to develop these concepts within their daily structured play.

We believe that all children, when introduced to a new concept, should have the opportunity to build competency by taking the '**physical, pictorial, abstract**' approach. The children should have the opportunity to use physical objects and manipulatives to help them understand what they are doing. Alongside this, the children should use pictorial representations. These representations can then be used to help reason and solve problems. Both these physical and pictorial representations should support the children's understanding of abstract methods.

At Shefford Lower School we recognise that formal recording does not always maximise children's learning in mathematics. Children record their work when it is appropriate and use jottings to show their methods and thought processes. However, mathematics may often be practical or investigatory when the only evidence may be the teacher's notes or photographs.

The written calculation strategies used are outlined in the **Calculation Policy** which was written in conjunction with Robert Bloomfield Academy and their feeder schools.

There are termly layered targets set for the children. These are displayed in the classrooms (must, could, should) and are worked towards at least three times a week.

Children in years 2 to 4 will practice their multiplication tables regularly throughout the week using an electronic programme so that by year 4 they have the ability to recall multiplication facts up to 12 x 12.

Assessment, Reporting and Recording

Please see the **Marking and Feedback Policy** and the **Assessment and Reporting Policy** for general and subject-specific information.

- On-going (formative) assessment is carried out during maths lessons through questioning, observations and children's recording and plans are annotated accordingly. These assessments are used to provide guidance of the areas that need to be re-visited with the whole class, groups of children or individuals.
- Summative assessment takes place in the form of SATs in Year 2. Other year groups may use tests where appropriate for diagnostic reasons.
- Children in years 2 to 4 will have regular times tables checks, using multiplication and division facts linked to the tables they should know in their year group. Year 1 children will be assessed on their number bonds.
- From the Early Years Foundation Stage (EYFS) parents are informed of individual progress during twice yearly consultation meetings, where details are given of children's achievements and areas for development.
- Termly Reviews of pupil achievement are issued to parents every term.
- Early Excellence is used within the Early Years to keep parents up to date with their child's experiences and to track their achievements.

Individual needs

The questioning, steps to success and big question, as well as staff support and the use of different resources, enable all different needs to be accommodated within lessons.

Intervention (e.g. 'First Class Maths' and 'Maths Catch Up') are provided in Reception, key stages 1 and 2 by trained teaching assistants to help children who need some extra support. These interventions take place in addition to the daily maths lesson. There are also regular additional sessions for more able mathematicians.

1:1/Group Tuition is made available for some children, including those who are eligible for Pupil Premium. These groups run outside of the school day and are planned for/led by school teaching staff.

Partnership with parents

Parents are asked to support their maths homework, which for years 1 to 4 is primarily set through the website 'Mymaths'. They are also asked to support their children with learning their times tables and other mental facts. There are also workshops for parents to help them understand how we teach maths in school and how they can support their children with this.

Cross curricular links

All teachers build in high quality opportunities for children to use, apply and develop their mathematics skills across the curriculum. In this way children have opportunities to use their skills in meaningful contexts.

Equality Statement

The governors and staff are committed to ensuring that everyone is treated fairly in accordance with the school's values. We are committed to providing the full range of opportunities for all individuals, regardless of gender, disability, ethnicity, social, cultural or religious background, and to overcoming any barriers to that access. We believe all individuals have the right to an environment, which dispels ignorance, prejudice or stereotyping, in which to learn and develop.

Evaluation

The implementation of this policy will be monitored by the Mathematics Subject Leader who will evaluate developments in this area and identify any action points on the school improvement plan. The policy will be reviewed once every three years by staff and governors.

Date reviewed	February 2019
Next review date	February 2022
Maths Subject Leader	P Bowen
Headteacher	T Callender
Chair of Governors	V Thompson