

Slimbridge Primary School

Mathematics teaches children to make sense of the world around them through the development of their ability to calculate, reason and problem solve. It enables children to understand and appreciate relationships and patterns in their everyday lives as well as giving them the tools to approach a problem with confidence and explore ideas and concepts with freedom and ingenuity.

Using the objectives from the 2014 National Curriculum for Mathematics we aim to promote:

- Become **fluent** in the fundamentals of mathematics through varied and frequent practice
- **Reason** mathematically
- **Solve problems** by applying mathematics to a variety of routine and non-routine problems
- Independent thinking and initiative through an inter-connected subject approach

Breadth of Study

Through careful planning, preparation and organisation we aim to ensure that throughout the school children are given opportunities to:

- Develop their problem solving and discussion skills as an integral part of daily teaching alongside purely mathematical activities.
- Take part in a range of activities including short term and those which can be expanded over a longer period of time, emphasising the importance of systematic and logical work.
- Work independently and in different sized groups, giving them occasion to communicate and reason about their work with children of differing attainment.
- Access a mixture of open ended and closed tasks to encourage independence and creativity.
- Develop different types of calculation; including mental, written and calculator methods and the chance to choose the most efficient method in different situations. See the school 'calculation' policy for details.
- Access resources for practical and visual support in their learning, as well as allowing them to choose their own equipment and develop independent learning.

- Use ICT in mathematics to enhance their learning, including the use of interactive whiteboards and individual laptops where appropriate.
- Develop a positive attitude to mathematics with emphasis on all children being encouraged and supported in equal measure.

Maths in the school day

At Slimbridge Primary School we aim to develop pupils' abilities across all areas of mathematics.

Pupils are given varied opportunities to develop the following skills.

In KS1 these are:

- Number and place value including four operations and fractions
- Measurement
- Geometry
- Statistics

In KS2 these are:

- Number and place value including four operations and fractions
- Measurement
- Geometry
- Statistics
- Ratio and Proportion
- Algebra

Early Years Foundation Stage

In the Early Years Foundation Stage (Little Otters and the Reception class), mathematics is taught in practical ways in order to promote the development of mathematical language and understanding. Child initiated learning opportunities are cross-curricular and children experience a wide range of open-ended problems and resources, both indoors and out. In the Reception class mathematics is also taught as a discrete subject, with short daily carpet sessions to introduce new mathematical concepts and to practise existing skills

Cross Curricular Links

Mathematics contributes significantly to the teaching of other subjects in school, in particular English, ICT and PSHE.

Teachers seek to take advantage wherever possible of opportunities to promote and extend mathematics across the curriculum in many ways, including the following:

- Speaking and listening through discussion and explanation of their work.
- Stories and rhyme that rely on counting and sequencing.
- Encountering graphs and charts in non-fiction texts.
- Creating repeating patterns, using measures and angles, producing graphs, tables and handling data in ICT.

Teacher's Planning and Organisation

Each class teacher is responsible for the mathematics in their class in consultation with and with guidance from the mathematics coordinator. Each class organises a daily lesson of 60 minutes for mathematics with a mixture of whole class, group and individual work. Lessons are planned using personal planning formats which must include a number of criteria and are monitored by the mathematics co-ordinator.

The Foundation Stage is taught to objectives in the Early Years Framework; this ensures that they are working towards the 'Early Learning Goals for Mathematical Development'. Lessons are planned using a unique planning format and are monitored by the mathematics co-ordinator.

Pupil Recording

Children are taught a variety of methods for recording their work and they are encouraged and helped to use the most appropriate and convenient method of recording. Children are encouraged to explore different ways of recording their work and are given choices when possible.

Each child has an exercise book for recording their work; however, individual whiteboards are also used where appropriate. Exercise books in KS1 and KS2 are squared to show children how to organise their work when necessary or practical. All children are encouraged to work tidily and neatly when recording their work to ensure accuracy and when using squares one square is used for each digit.

Assessment

Teachers assess the progress of each individual child at the end of each unit or every half term (6weeks). Teachers use an online tracker called 'Insight' to monitor attainment and progress of mathematics.

Reporting to Parents

Reports are completed before the end of the summer term and parents are given opportunity to discuss their child's progress on two further occasions during the year.

Teachers use the information gathered from their APP assessments to help them comment on individual children's progress and attainment.

Monitoring and Evaluation

The mathematics coordinator is released when necessary from his/her classroom in order to work alongside other teachers. This time is used to monitor and evaluate the quality and standards of mathematics throughout the school and enables the coordinator to support teachers in their own classrooms.

Opportunities for teachers to review the scheme, policy and published materials are given on a regular basis during staff meetings.

Resources

All children have access to a number of varied resources and teachers use them accordingly to enhance learning.

Homework

It is our school policy to provide parents and carers with opportunities to work with their children at home. These activities may only be brief, but are valuable in promoting children's learning in mathematics. From Year 2, parents are encouraged to help their children become fluent in the four operations of addition, multiplication, subtraction and division. Weekly challenges are set to support this. In KS2, Maths homework may be set on a regular basis to cement skills learnt in class.