



All Saints Laxfield Primary School

Mathematics Policy

Summer 2023

1. Introduction

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject (National Curriculum, Mathematics Programme of Study, Department for Education, 2014).

Here at All Saints we believe that Mathematics equips pupils with the uniquely powerful set of tools to understand everyday life, understanding the world around them. 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 children develop a healthy and enthusiastic attitude towards mathematics that will stay with them throughout school and into their future.

2. Purpose

This policy is based on the directives of the new National Curriculum. It aims to establish a positive learning environment for mathematics focusing on fluency, reasoning and problem solving in varied and exciting ways.

Mathematics is not learning a set of isolated facts and techniques; it is a language which children can use to help interpret the world around them. It is essential for children to develop problem solving skills in all aspects of their life. By building on the children's own life experiences, mathematics encourages their reasoning skills to develop so they are able to apply this to real life problems and situations.

At All Saints C.E, Laxfield Primary School we aim to develop both mental and written fluency of mathematical skills to ensure children develop their confidence when working with mathematics in day-to-day life

3. Audience

This document is intended for use by all teaching staff and to provide information for the governors and inspectors. Copies can be found on the school's website or can be obtained from the Maths Coordinator, Daniel Millican.

4. Aims

Our aims to develop are as follows:

- A positive attitude towards mathematics. Maths is fun – and we want our pupils to enjoy it as much as we do as a staff!
- An appreciation of mathematical patterns and the ability to identify relationships between numbers, and using it in as many situations as possible.
- A structural approach to build up mathematical language all children, including those who speak English as an additional language, emphasising the key mathematical vocabulary.
- The application of mathematical knowledge, skills and understanding through practical tasks and real life problems.
- The ability to reason and explain mathematical procedures.
- The ability to think clearly and logically and to work with perseverance.
- Cooperation between children when working together to find a solution, rule or pattern.
- A wide range of mental and written strategies which can be explained orally to the teacher when discussing how a problem or a question has been tackled.
- The ability to select effective, efficient methods and match them to the task, and to know when it is appropriate to approach a problem mentally, written or with a calculator tool.
- An awareness of the uses of mathematics within and beyond the classroom and the ability to transfer and apply knowledge to other situations.
- The usage of manipulatives to develop a reasoning understanding of mathematics.

5. Curriculum Organisation

Curriculum Organisation The new National Curriculum for mathematics is divided into seven sections from Year 1 to Year 6, covering all aspects of mathematics. They are:

- Place value and number
- Addition and subtraction
- Multiplication and division
- Fractions
- Measurement
- Geometry
- Statistics

Each of these is studied throughout the year. All learning objectives are revisited throughout the year. This enables children to improve and develop their skills throughout the year, ensuring they are confident in that year groups objectives' before moving on to the next.

Within each of the aforementioned topics, children will develop their skills in each of the three focuses:

- Fluency and calculation - mental and written.
Written calculation has become embedded with a calculation. This is adhered to within each year group unless the class would benefit from a different approach (this is up to the teachers' discretion). The CP also supports mental methods and these are developed and embedded through starters, tasks and plenaries. Multiplication tables are taught in each year group at the direction of the class teachers who know what their children need and differentiate accordingly. Numerous resources are used to develop this including My Maths, Times Table Rock Stars and also various workbooks/booklets.
- Reasoning - demand of the current SATs for Year 2 and 6 is in the reasoning and understanding of mathematics. In order to equip pupils with the skills required, children will be grouped accordingly and exposed to apply groups will be set within each objective and shared at the completion of an objective They will be incorporated into various starters and plenaries thus enabling all children to access a level of apply in each lesson. Additional reasoning and problem solving days will be delivered to the whole school and included in art week. The combined implementation of these strategies aims to work towards and address the maths target included in the SIP. Resources and activities have been purchased to develop teaching and provide challenging learning opportunities.
- Problem Solving – just like reasoning, problem solving will also have increased priority; without problem solving skills reasoning is increasingly challenging. Extra resources have been purchased/ will be purchased to help aid the process of problem solving. Within our application of activities for reasoning and problem solving, objectives from any of the sections of study will be introduced, revised and practised. If relevant, links between maths and other subjects will be linked in order to help develop their problem solving skills.

6. Planning

Weekly plans will be kept by teachers. It will be up to the discretion of the teachers as to what order they will teach the curriculum. It will enable the teachers to consider the ability of the class and teach in a way which is more beneficial to the children. It will be modified and adapted each year to ensure the each class is taught effectively.

7. Teaching and Learning Strategies

Teachers will use and balance a variety of teaching strategies, including:

- A variety of different tasks to teach, practise and apply. Questioning will also be varied and will include specific targeted closed questions for assessment purposes as well as open ended questions allowing for a variety of different responses and possible correct answers depending on the ability of the children concerned.
- The development of mathematical strategies through language and vocabulary, in particular questioning and sharing their thinking.

Further development of mathematical strategies will come from:

- Classroom organisations (plenaries, group work, resources, reasoning).
- Explanations by teachers and children to illustrate and reinforce particular teaching points.
- Teaching points given throughout the lesson not just at the start.
- Direct and indirect teaching techniques. Children will receive instruction and direction, but will also be given work on tasks which will allow learning to take place through investigation, observation and exploration, using links with other subjects.
- The management of support staff and adult assistance.
- Systematic teacher monitoring of maths work in class, resulting in interventions when necessary, space for children to work on their own and the use of misconceptions as teaching points.
- A working attitude which involves maths in the daily routine of the classroom, with equipment labelled and accessible, and classroom displays, reflecting maths taking place in the classroom at that time and at that time of year.

8. Assessment, Recording and Reporting

On a daily basis, marking and feedback is the most effective way of measuring impact. Live marking is used as much as possible with the children so that teachers are able to gain immediate feedback

on the progress being made within a lesson and identify gaps in learning. These are then plugged through either immediate intervention in the lesson or during a short catch up session later in the day in most classes. Live marking also allows teachers to deepen pupils understanding through identifying when children are ready to move their learning on. Teachers will record this against the National Curriculum objectives. This will be used to assess how a child has found that specific topic.

The ongoing assessments made by the class teacher are combined with formal NFER and SAT testing scores to enable each test to make a summative assessment on the level at which the pupil is working for the objectives taught. We are aware that children need to continually revisit objectives to ensure their understanding is deepened. It is important to give children the opportunities to use these skills on reasoning style questions. These tests are used on a termly basis and give a standardised score. These scores will inform the class teacher as to where the child is working.

9. Evidence of Attainment and Recording Achievement

Evidence of attainment in mathematics can take a variety of forms, including:

- Samples of work in written or visual forms
- Models and photographs (in books and on the website)
- Observations of the children – shown through tapestry (Reception)
- Questioning or discussion with individuals or groups of children.
- Use of tests in all year groups not just year 2 and 6.
- Learning walks and formal/informal observations
- Pupil perception surveys
- Foundation stage profiles

10. Role of the Coordinator

The mathematics co-ordinator is responsible for co-ordinating mathematics through the school. This includes:

- Ensuring continuity and progression from year groups to year group.
- Advising and supporting colleagues in the implementation and assessment of mathematics throughout the school.
- Advising on in-service training to staff where appropriate. This will be in line with the needs identified in the school improvement plan and within the confines of the school budget.

- Assisting with the requisition and maintenance of resources required for the teaching of mathematics. This will be within the confines of the school budgets.

11. Role of the Class Teacher

- To develop and update skills, knowledge and understanding of mathematics.
- To identify inset needs in mathematics and take advantage of training opportunities.
- To keep appropriate on-going records (assessment and planning).
- To plan effectively for mathematics and liaising with the co-ordinator when necessary.
- To inform parents of pupils' progress, achievements and attainment.

12. Evaluation

At the end of each academic year, the co-ordinator, Head of School and staff will review and evaluate the mathematics taught. Evaluation should take into account:

- Pupil achievement, both in tests and by teacher assessment.
- Coverage of curriculum
- Moderation of marking
- Analysis of teachers books
- Any issues arising from teaching, regards common problems or difficulties

Evaluation:

This policy will be review as and when necessary

Updated: May 2023