



# Lea Endowed C of E Primary School Mathematics Policy

September 2023

## LEA ENDOWED CE PRIMARY SCHOOL MATHEMATICS POLICY

### 'LET EVERYONE SHINE'

At Lea Endowed Church of England School we provide an excellent education for our children. We follow God's example, by loving Him, and each other, in all that we do.

Our whole school family is encouraged to achieve their full, God given potential and shine in their own special way.

*"Let your light shine."*

**Matthew 5:16**

### Introduction

- The curriculum at Lea Endowed is designed to provide a deep and wide education that meets the needs of all children and gives them the skills, knowledge and understanding to prepare them for their future lives. We want to help each child become a caring, confident and curious young person who has a passion for learning and achieving. Children are encouraged to follow God's example and to achieve their God given potential in all aspects of the curriculum.
- The curriculum ensures that academic success, creativity and problem solving, reliability, responsibility and resilience, as well as physical development, well-being and mental health are key elements that support the development of the child and promote a positive attitude to learning.
- The curriculum supports the children's spiritual, moral, social and cultural development through its distinctively Christian character and its celebration of individuality, skills, knowledge and the cultural wealth of the wider school family.

### Curriculum Statement of Intent

At Lea Endowed Church of England Primary School we provide a Deep and Wide curriculum which supports a **lifelong love of learning** for every **unique** and individual child, underpinned by our distinctively Christian ethos. The teaching and learning of the curriculum is **inspirational** and **relevant** to promote **creativity** and the **courage** to ask Life's Big Questions. Through positive **challenge**, children will **flourish** and become both **independent** and **collaborative** learners.

## Maths Curriculum

At Lea Endowed, we believe that mathematics is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.

This policy outlines what we are aiming to achieve in respect of pupils' mathematical education. It also describes our agreed approach to the planning, delivery and assessment of the mathematics' curriculum.

The National Curriculum (2014) for mathematics describes what must be taught in each key stage. The mathematics taught and the methods used reflect both the statutory requirements and the non-statutory guidance and recommendations outlined in the following documents:

- (A) The Statutory framework for the early years foundation stage. Setting the standards for learning, development and care for children from birth to five.  
Published: 3 March 2017
- (B) The Development Matters in the EYFS
- (C) Mathematics Programmes of Study: key stages 1 and 2 National Curriculum in England (2014)
- (D) White Rose Maths Scheme of Work

This policy provides information and guidance for staff, governors and other interested persons.

## Aims

Mathematics helps children to make sense of the world around them through developing their ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics.

At Lea Endowed CE Primary School we aim to:

- develop a positive attitude to mathematics as an interesting and attractive subject in which all children gain some success and pleasure;
- develop mathematical understanding through systematic direct teaching of appropriate learning objectives;
- encourage the effective use of mathematics as a tool in a wide range of activities and contexts within school and, subsequently, adult life;
- give opportunities for children to solve increasingly complex problems which require them to recall and apply their knowledge
- develop an ability in the children to express themselves fluently, to talk about the subject with assurance, using correct mathematical language and vocabulary;
- develop ability to think clearly and logically with independence of thought and flexibility of mind;
- develop reasoning skills through flowing lines of enquiry, understanding relationships and generalisations and developing an argument, justification or proof using mathematical language
- develop an appreciation of creative aspects of mathematics and awareness of its aesthetic appeal;
- develop mathematical skills and knowledge and quick recall of basic facts

The school uses a variety of teaching styles to cater for the different learning styles of pupils in mathematics lessons. Our principle aim is to develop children's knowledge, skills and understanding in mathematics. We do this through a daily lesson that has a high proportion of whole-class and group-direct teaching. During these lessons we encourage children to ask as well as answer mathematical questions. They have the opportunity to use a wide range of resources such as number lines, number squares, digit cards and small apparatus to support their work. Our teaching follows the concrete, pictorial, abstract model. Children use technology in mathematics lessons where it will enhance their learning, as in modelling ideas and methods. Although the programmes of study of the National Curriculum (2014) are organised into distinct domains we believe as the National Curriculum states 'that pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasing sophisticated problems' (DFE, 2013:3) With this

at the forefront of our teaching we ensure that using and applying is integrated into planning and teaching.

In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child.

We use teaching assistants to provide appropriate support to individuals or to groups of pupils. Teaching assistants within Lea Endowed CE Primary School are viewed as an important asset to the school and, as such, are appropriately involved in the planning and delivery of the mathematics curriculum. Their knowledge, skills and understanding is constantly updated through involvement in school-based and LA led Inset. Individual training needs are addressed through annual appraisal procedures.

### **Mathematics Curriculum Planning**

Mathematics is a core subject in the National Curriculum, and we use the Mathematics Programmes of Study: key stages 1 and 2 National Curriculum in England (2013) and the White Rose Maths Scheme as the basis for implementing the statutory requirements of the programme of study for mathematics.

Our weekly plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught.

The Head Teacher, SLT and subject leader are responsible for monitoring the mathematics planning, teaching and learning within our school.

### **Assessment**

Assessment has two main purposes:

- assessment of learning (also known as summative assessment);
- assessment for learning (also known as formative assessment).

#### **Assessment of learning (AoL) – summative assessment**

Assessment of learning is any assessment that summarises where learners are at a given point in time – it provides a snapshot of what has been learned. Within Lea Endowed CE Primary School, summative assessment is used appropriately, e.g. to provide a Teacher Assessment level and grade at the end of KS1.

## Assessment for learning (AfL) – formative assessment

“Assessment for learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to get to and how best to get there.”

(Assessment Reform Group)

At Lea Endowed CE Primary School we recognise that AfL lies at the heart of promoting learning and in raising standards of attainment. We further recognise that effective AfL depends crucially on actually using the information gained.

The assessment procedures within our school encompass:

- Making ongoing assessments and responding appropriately to pupils during ‘day-to-day’ teaching. These ‘immediate’ responses are mainly verbal and are not normally recorded;
- Using knowledge of pupils drawn from ongoing pupil tracking records to inform ‘prior learning’ at the beginning of each unit of work to guide our planning and teaching;
- Adjusting planning and teaching within units in response to pupils’ performance;
- Use of ongoing teacher assessment in order to identify gaps in attainment on a half termly basis and at the end of each full term using this information to judge a child’s attainment using the year group expectations (entering, developing, secure) judgements;
- Use of information gained from statutory and optional tests. Information gained is used to set focused curricular targets (what to teach) and also to determine which strategies or methods are particularly effective in respect of specific areas of mathematics (the how and why).

### The Foundation Stage

Work undertaken within the Foundation Stage is guided by the requirements and recommendations set out in the The Statutory framework for the Early Years foundation stage. Setting the standards for learning, development and care for children from birth to five. Published: 31st March 2021 and The Development Matters in the EYFS.

We give all the children ample opportunity to develop their understanding of mathematics. We aim to do this through varied activities using concrete resources that allow them to enjoy, explore, practise and talk confidently about mathematics.

### **Contribution in Mathematics to Teaching in Other Curriculum Areas**

At Lea Endowed CE Primary School, we promote cross-curricular teaching and learning to embed learning across a range of contexts. This is done in the following ways:

#### ***English***

Mathematics contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening.

#### ***ICT***

The effective use of technology can enhance the teaching and learning of mathematics when used appropriately. When considering its use, we take into account the following points:

- Technology should enhance good mathematics teaching. It should be used in lessons only if it supports good practice in teaching mathematics;
- Any decision about using technology in a particular lesson or sequence of lessons must be directly related to the teaching and learning objectives for those lessons;
- Technology should be used if the teacher and/or the children can achieve something more effectively with it than without it;

#### ***Science***

Almost every scientific investigation or experiment is likely to require one or more of the mathematical skills of classifying, counting, measuring, calculating, estimating and recording in tables and graphs. In Science pupils will for example order numbers, including decimals, calculate simple means and percentages, use negative numbers when taking temperatures, decide whether it is more appropriate to use a line graph or bar chart, and plot, interpret and predict from graphs.

### ***Art, Design and Technology***

Measurements are often needed in art and design and technology. Many patterns and constructions are based on spatial ideas and properties of shapes, including symmetry. Designs may need enlarging or reducing, introducing ideas of multiplication and ratio. When food is prepared a great deal of measurement occurs, including working out times and calculating cost; this may not be straightforward if only part of a packet of ingredients has been used.

### ***History, Geography and Religious Education***

In History and Geography children will collect data by counting and measuring and make use of measurements of many kinds. The study of maps includes the use of co-ordinates and ideas of angle, direction, position, scale and ratio. The pattern of the days of the week, the calendar and recurring annual festivals all have a mathematical basis. For older children historical ideas require understanding of the passage of time, which can be illustrated on a time line, similar to the number line that they already know.

### ***Physical Education and Music***

Athletic activities require measurement of height, distance and time, while ideas of counting, time, symmetry, movement, position and direction are used extensively in music, dance, gymnastics and ball games.

### ***Personal, Social and Health Education (PSHE) and Citizenship***

Mathematics contributes to the teaching of personal, social and health education, and citizenship. The work that children do outside their normal lessons encourages independent study and helps them to become increasingly responsible for their own learning. The planned activities that children do within the classroom encourage them to work together and respect each other's views.



## **Teaching Mathematics to Children with Special Needs**

At Lea Endowed CE Primary School we aim to provide a broad and balanced education to all pupils. Effective pupil tracking enables identification of pupils who may benefit from early 'intervention' at an appropriate level.

We also recognise, and aim to make provision for, pupils who have a particular ability in mathematics.

### **Resources**

There are a range of resources to support the teaching of mathematics across the school. Staff are encouraged to use practical and visual models to support children's learning in mathematics. All classrooms have a wide range of appropriate practical apparatus and there is a store of resources in the Y5/6 Cloakroom cupboard. A variety of software, including Times Table Rocksars, is available to support mathematics work.

### **Appendices**

- Calculation Policy for progression in Addition
- Calculation Policy for progression in Subtraction
- Calculation Policy for progression in Multiplication
- Calculation Policy for progression for Division

Kerry Morris (Mathematics Subject Leader)

Policy Review date: Autumn Term 2024