

# Leyland St James CE Primary School

## Mathematics Policy



**Maths Subject Leader:** Mr Atherton

**Maths Lead Governor:** Mr A Hammersley

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**Date approved by the full Governing body:** October 2022

**Date to be reviewed:** September 2025

## **Rationale**

Mathematics is a powerful means of communication and a tool for everyday life. It is used to provide the means by which we can convey thoughts and ideas. Information and concepts can be presented by the use of numbers, letters, drawings, charts and diagrams.

By using examples and applying logic, generalised principles can be deduced. This requires the need to check and make hypotheses. Mathematics can, therefore, be a useful tool to communicate information required in other subjects, in everyday life and the world of work.

Appreciating mathematical principles expressed in art, literature, music and the way things work adds another dimension to interpreting the world in which we live.

## **Aims**

Our aim is to help each pupil develop as far as possible the knowledge, skills and understanding in mathematics which will be required in further study and adult life.

All staff have high expectations for all our pupils.

We also aim to develop a fascination with the subject and give all children the confidence to use their mathematical knowledge and understanding with fluency and accuracy.

## **Objectives**

How do we intend to achieve these aims?

There are three main areas for development:

- Conceptual development – the understanding of concepts in mathematics that require the learning of facts and knowledge
- Reasoning – the skill to apply knowledge of a concept to deepen understanding and to extend the understanding of a concept

- Problem solving – the ability to use mathematical skills and concepts to solve mathematical problems or to carry out mathematical investigations.

### **Journaling:**

Leyland St James' CE Primary School have developed a 'journaling' to the beginning of each Maths lesson. Journal is a tool for pupils to communicate, articulate and explicate their mathematical thinking during the the exploration stage of learning. From Year 1 through to Year 6, lessons begin with a journaling word problem - prompting discussion, collaborative reasoning and the freedom for children to choose concrete, pictorial and abstract methods to find solutions and methods. Journaling allows children time to explore their own pathway when solving mathematical problems, whilst being steered and guided by the teaching staff. Teachers and support staff facilitate, discuss and develop the learning of specific groups and individuals. Lessons and activities are designed to be taught using problem-solving approaches to encourage pupils' higher level thinking. Maths Mastery opportunities are offered to pupils in a range of ways:

1. **Maths No Problem:** The workbook builds in questions and challenges for mastery and greater depth learning.
2. **Teacher Questioning:** Using planned and spontaneous assessment for learning questioning, prompting discussion and discovery.
3. **Mini Plenaries:** Scaffolded mastery discussion points for small or whole class group learning.
4. **NCETM Mastery** and Greater Depth Teaching opportunities <https://www.ncetm.org.uk/classroom-resources/assessment-materials-primary/>
5. **White Rose** <https://whiterosemaths.com/resources/primary-resources/primary-sols/>

The National Curriculum 2014 for mathematics is used as the basis for planning the programme. The subject will be taught using 'Maths, no problem' It is our day to day reference point and enables us to set appropriately high expectations for all pupils in our school through a mastery-based approach to Mathematics.

The main emphasis throughout the school is on learning and understanding Mathematical concepts through the use of a concrete – visual – abstract approach, with problem solving and reasoning at the core of every lesson. We develop a range

of mental and written strategies to solve problems and to know the appropriate strategy to apply in different situations.

Through the use of Maths, no problem we then enhance our curriculum through the use of further challenges and appropriate mathematical equipment to enable children to support themselves within their learning. Each member of staff is also able to access online training materials within the programme as well as receiving termly training through our teaching school alliance cluster. Further longer-term needs are addressed via our annual School Development Plan, including a specific Maths action plan.

### **Schemes of work**

Our scheme of work is Maths, No Problem. <https://mathsnoproblem.com/> This ensures good coverage of the year group objectives laid out in the National Curriculum 2014.

### **Cross-Curricular Teaching**

Throughout the whole curriculum, opportunities to extend and promote Mathematics are exploited and explored. Teachers seek to take advantage of all opportunities to advance the children's enjoyment and understanding of Mathematics. We particularly promote the development of number through data handling, shape and measures through the teaching of Science, Music, Design and Technology and Art. However, there are endless mathematical links to all the subjects within the curriculum.

### **Teachers' Planning and Organisation**

Each class teacher is responsible for the mathematics in their class, in consultation with and with guidance from the mathematics subject leaders.

The approach to the teaching of mathematics within the school is based on three key principles:

- A mathematics lesson five times a week (approx 1 hour in KS1 and KS2 and a daily carpet session within EYFS with learning provided for pupils through continuous provision and adult led tasks). Mixed year group classes are taught in straight year groups by a teacher.
- Each lesson begins with an 'Explore' journaling problem, followed by teaching within 'Master' and a supported session within 'guided practice' before completing an independent 'workbook' task

- The use of ICT is built into the daily lesson when beneficial to the learning.

Lessons are planned using the schools agreed methods of adapting and annotating within a text book while referring to the Maths-No Problem Lesson guidance and supporting video support.

Year 6 follow Maths No Problem between Autumn 1 and Autumn 2 with one weekly arithmetic lesson built into their 5 lessons a week programme. Between Spring 1 and Spring 2 lessons continue to follow the curriculum whilst following a combination of White Rose, Maths No Problem and NCETM planning. Beyond the end of Key Stage 2 SATS, Year 6 continue to consolidate their learning within class.

### **Progression of Written Calculations**

Progression of written calculation is guided by the Written Calculation policies and each individual teacher's professional judgement.

### **Special Educational Needs, Disability and Intervention**

Equal opportunities are a fundamental principle in this school and the mathematics programme is in line with the school's statement of equal opportunities for all our children as their right of entitlement.

Special Educational Needs are accounted for in the SEND policy.

School TLP's are drawn up for those children on the special needs register with the guidance of the SENDCO and reviewed on a termly basis. The school uses intervention support and pre-learning based upon the 'Maths no problem' concepts to support pupils.

Each class teacher is also supported by a classroom assistant during Mathematics lessons, such as to provide support for those children that might need it, or to challenge others to develop their thinking further.

Within each Mathematics lesson, resources and visual guidance are used to support pupils as they all work to complete the same core tasks, with further challenges to enable children to develop their understanding in different contexts.

The children's performance within lessons is monitored and children receive targeted intervention where gaps in understanding are found. This is as immediate as can be catered for and, ideally, delivered by the teacher. This is in addition to the daily Maths lesson.

### **Pupils' Record of Work**

Pupils record their work in various ways within both their Maths journals, as well as within the workbooks themselves. Independent informal methods of recording are encouraged as part of the learning process to explain and demonstrate their mathematical thinking and understanding. (see calculation policy).

All children have Mathematics Journals and work books to record work, while in EYFS, evidence from continuous provision is recorded in their Learning Journey's.

The children are encouraged to record their work neatly in line with the teaching and learning policy.

### **Marking**

Work in mathematics should be closely monitored by the teacher and with the help of support staff. The marking policy provides guidance on how staff should mark within mathematics. Essentially, marking and feedback should take place at all times within class sessions, however this won't always be written. Teachers and support staff are encouraged to feedback to pupils, provide scaffolded comments/prompts, particularly during the lesson as 'live marking'.

However, the teacher oversees the progress of pupils and will comment on attitude and attainment, seek to deepen learning and to prompt or scaffold support.

Where appropriate, next steps are indicated and children are asked to work on next steps during the next lesson.

### **Assessment and Record Keeping**

Teachers are expected to make regular assessments of each child's progress and to record these systematically. Assessment in mathematics takes the form of formative assessment for all pupils, including a baseline assessment in EYFS followed by moderated judgements against the Early Years Outcomes for Number and numerical patterns and end of Key Stage testing in KS1 and KS2 (SATS).

From 2019-2020, Year 4 pupils will also be tested on their times tables knowledge through the introduction of a new statutory Government assessment.

Teachers assess the attainment of objectives and record whether children are working within their age related expectations. These are recorded on a class mark sheet within the front of children's journals. The assessment judgements are also supported by the completion of 'reviews' at the end of each chapter of Maths, No Problem.

### **Reporting to Parents**

Parents are given the opportunity to discuss their child's progress in detail during the middle of the autumn term and Spring terms during parents evening.

Interim reports of children's progress are sent out half way through the academic year and parents are given the opportunity to discuss their child's progress thereafter.

Detailed annual reports are completed before the end of the summer term and parents may have additional feedback if they so require.

All teachers operate an open-door policy and parents are welcome into class at any appropriate time, as well as to communicate via Class Dojo.

### **Monitoring and Evaluation**

The Maths subject leaders, Headteacher and Deputy Headteacher monitor and evaluate the quality of teaching and learning and standards via regular contact with colleagues; scrutinising attainment against targets; termly book scrutinies and by monitoring children's responses to their learning.

Opportunities for discussion of progress and review of schemes and policies are offered regularly at staff meetings.

### **Staffing and Resources**

All teachers have a dedicated maths resource area within their classrooms. Additionally, centrally used resources are housed in the key stage departments.

## **The Governing Body**

We have a designated Mathematics member of the governing body, Mr A Hammersley, who visits school to monitor the teaching within mathematics and to challenge and support the school in raising standards in mathematics.

The Mathematics governor reports back to the curriculum committee on a regular basis, while also setting areas of focus for future terms and contributing to the Maths action plan.

## **Homework**

In line with our home/school contract we set out of school activities linked to learning in class. Pupils are set short and focused tasks that are varied, interesting and fun. The tasks are intended to stimulate learning and enhance a range of study skills. All children from KS1 upwards are expected to learn their times tables and other mathematical facts, which are tested at regular intervals.