

Longridge Church of
England Primary School

Mathematics Policy



Maths curriculum intent statement.

At Longridge CE Primary school, we believe that everyone can achieve in maths. Therefore, we offer a curriculum that is child centred and fun to teach. A curriculum that will maximise the development of every child's ability and academic achievement. Traditionally, maths has been taught by memorising key facts and procedures, which tends to lead to superficial understanding that can easily be forgotten. At Longridge CE Primary School, we believe that children should be able to select which mathematical approach is most effective in different scenarios. To be able to do this, we use the 'Maths no problem,' an approach that incorporates concrete, pictorial and abstract all of which help children to explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding.

We believe that maths is essential to everyday life and can be applied in other subject areas. Maths is critical to science, technology and engineering, and necessary for most types of employment. Therefore, we want to equip our pupils with the knowledge and skills to understand the world in which they live, have the ability to reason mathematically, have an appreciation of the power and beauty of mathematics, a sense of enjoyment and curiosity about the subject, and be able to problem solve and apply their learning in real life situations.

What are the aims of this subject?

- To develop a positive attitude towards the learning and use of mathematics, making it an enjoyable experience.
- To become confident and competent with numbers and the number system.
- To promote mathematical reasoning by following a line of enquiry, developing an argument and making justifications using mathematical language.
- To develop a practical understanding of the way in which information is gathered, presented and used.

- To explore features of shape and space and develop measuring skills in a range of contexts.
- To develop the ability to work both independently and to co-operate and communicate with others on practical tasks.
- To develop the ability to use and apply mathematics across the curriculum and in real life, ie telling the time and understanding money.

How is mathematics organised throughout the school?

Early Years Foundation Stage

The Early Years Foundation Stage follow the new Framework for maths, and this is used to develop confidence and skills in number and pattern. Children achieve this through investigating, exploring, talking, questioning, problem solving and having fun doing everyday things. Children in the Foundation Stage are taught to develop a deeper understanding of numbers to 10, and to count by rote to 20. Children are taught to state one more or one less than a given number, and to add and subtract two single digit numbers. They are also given opportunity to explore shapes and patterns around them, and to solve simple problems involving weight, capacity, time and money. Children achieve, through the use of fun activities and challenges in and out of the classroom environment.

Years 1-5

Years 1-5 are currently following 'Maths - No Problem' an approach to teaching mathematics developed in Singapore. This is a highly effective approach to mathematics based on research and evidence, and encourages pupils to think mathematically as opposed to reciting formulas they don't understand. Pupils are encouraged to solve problems, working with their core competencies such as visualisation, generalisation and making decisions.

Year 6.

Year 6 follow the requirements of the National Curriculum and teachers plan and deliver mathematics lessons using the Lancashire planning documents and Collins maths scheme.

Years 1-5 organisation.

Children in years 1-5 are taught mathematics for approximately 1 hour daily. Lessons are taught in 4 parts, the first of which is a short '5Alive' session. This is followed by the anchor task, where the whole class are given time to solve a specific problem using a range of resources to help them to find a solution. The third part of the lesson is 'let's learn.' In this part of the lesson the class teacher will give the answer to the problem and work through the different ways to solve it.

The fourth part of the lesson is 'guided practice' where children practise new ideas in groups, pairs or individually, guided by the class teacher. After approximately half an hour, there is a short break for Assembly. During this time, children who have not understood or grasped learning, and children who are feeling a little unsure of the new learning, receive intervention by the class teacher and the Teaching Assistant. This is very flexible and often contains different children each day, ensuring children are not labelled as poor mathematicians.

On returning to the lesson, the children complete part 5 - independent practice. Children complete set questions using the 'Maths - No Problem' work books. This is carried out without any support from the class teacher. Work is marked in a variety of ways ie by the class teacher, by their peers and also self- marking.

Year 6 organisation.

Children in year 6 are taught mathematics for approximately 1 hour daily. At the beginning of each lesson the children often undertake a short '5Alive' session. This will take the form of short, sharp teaching on a particular mathematical concept the children have been struggling with. This may also be related to 'catch-up' work as a result of Lock-downs. The children will then be given an oral or mental starter, followed by teaching of a specific learning objective taken from the Lancashire mathematics planning document. As with years 1-5, children who struggle with the new concept are given intervention during assembly time. Children then complete classwork independently using the Collins maths books and relevant worksheets.

Assessment

Years 1-5

In years 1-5 mathematics is assessed at the end of the first and second 'Maths - No Problem' workbooks. However, at the end of each unit, teachers assess

knowledge gained and the Mathematics KLIPs are highlighted to show progress. Children in Years 3 and 4, also complete formal test papers created by Mr Nixon. These cover all of the work that has been taught throughout the term, and have been created in the same format as 'Maths No Problem' and also the formal Lancashire test papers. Assessments for years 1,2 and 5, are in the process of being created by Mr Nixon.

Year 6

In year 6 a more formal method of assessment is used and children complete optional mathematics test papers, the results of which are used to highlight KLIPs and also inform progress which is then put on to the tracking system.

Formal Assessment

- Baseline Assessment at the beginning and end of the Reception year.
- KS1 SATs (Summer term)
- KS2 SATs (Summer term)
- Termly assessments using KLIPs in year 6
- 'Maths-No Problem' mid-year tests (years 1-5)
- School assessment sheets Years 3 and 4 (termly)
- Year 4 Multiplication Tables Checks

Resources

The use of mathematics resources is integral to the concrete-pictorial-abstract approach used in years 1-3. Therefore, classes 1-3 are equipped with several maths boxes containing a wide variety of good quality equipment and resources. These include number lines, place value cards, dice, base 10 materials, number cards and fans, coins, whiteboards and pens and pieces of small equipment for counting. As the children enter into years 4 and 5, they rely less on these and the focus will be more on written calculations. Larger pieces of mathematics equipment (scales, weights, measuring jugs etc..) are stored in the mathematics cupboards in the school library. Children are given opportunity to develop mathematics skills through computing, and use Interactive teaching programmes

such as Education City, Maths-Frame and Times Tables Rock Stars, to enhance learning.

Homework

Mathematics homework is set each week for children in years 1-6. Homework activities are varied, interesting and fun so that children are motivated; the tasks often compliment the area of mathematics being taught that week.

What provision is made for Special Needs?

All teachers plan for children in their weekly lesson plans. Within the 'Maths-No Problem' scheme, there are suggestions for differentiation of activities for both lower and higher ability children. Children who still struggle with grasping new concepts, are given daily maths intervention and their results placed on the school tracking system. These children may also receive daily Precision Teaching, or be part of a 'pupil progress' group. Children in K.S.2, who do not know all of their tables, are given extra intervention to support them with their learning.

Children in KS2 who are more-able, are given opportunity to attend the Maths challenge at the High School. However, due to Covid this has been postponed. All children in school can participate in World Maths Day challenge on line, and also in various maths competitions organised by Times Tables Rock Stars.

What is the role of the subject leader?

The role of the subject leader is:

- to provide professional leadership and management in mathematics
- to lead staff meetings and INSET where appropriate
- to monitor the teaching and learning of mathematics including planning and observation of teaching
- to audit resources, manage the budget, purchase and organise new materials
- to keep up to date with current issues
- to direct staff to appropriate courses

· to write and regularly review a subject action plan for mathematics.

Tim Nixon (Mathematics co-ordinator)

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