St Leonard's Church of England Primary School

Mathematics Policy

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Ratified by Governors	
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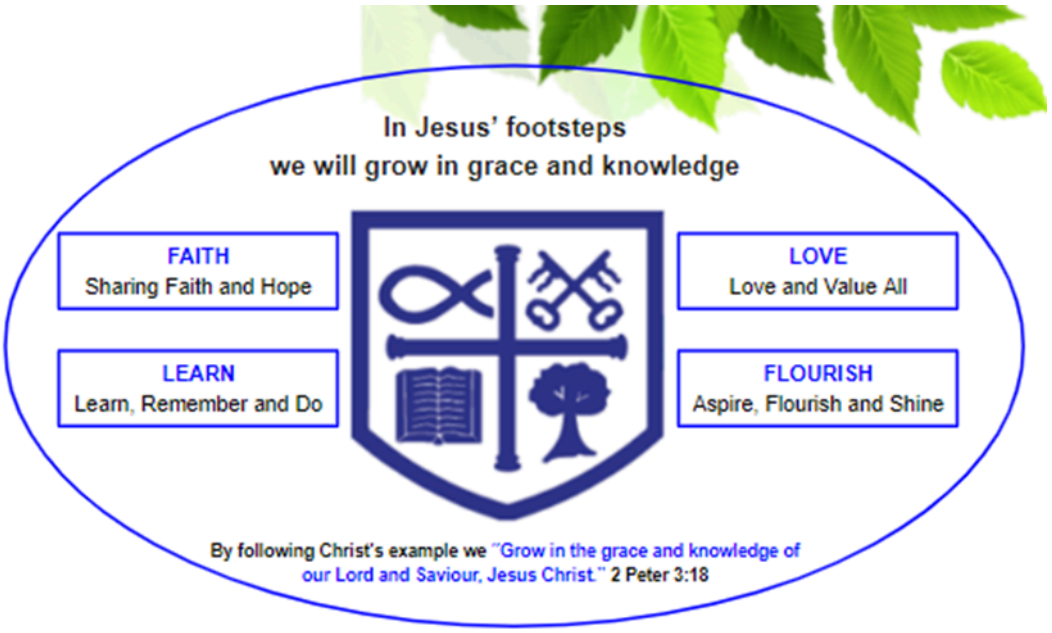
Mathematics Policy

This policy is intended to develop a commonly agreed and clearly understood approach to teaching Science. This will enhance the quality of teaching and learning throughout school and will ensure the participation of all our children. This teaching and learning policy is underpinned by our school's vision and values:



Intent

Our intention is that our children are fluent and systematic in the fundamentals of mathematics, able to make connections between different representations, and confidently use mathematical language to question, reason and problem solve effectively. By using and applying their knowledge and skills, our children will love and learn more about mathematics on their journey.

The importance of Mathematics:

At St Leonard's CE Primary School, all of our teaching and learning builds on our vision and values; Faith, Love, Learn and Flourish.

Sharing Faith and Hope: logic, reasoning and constructive debate are fostered in Mathematics lessons which help children to discern their own beliefs and understand those of others. The awe and beauty of the world is appreciated through the study of number and pattern.

Love and Value All: with a mastery approach, and whole class teaching, all children are given the tools and support to achieve well. We promote a positive growth mindset and recognise mistakes as an integral part of the learning process, thus respecting, supporting and valuing all learners.

Learn, Remember and Do: mathematics knowledge is cumulative so children are constantly applying previous knowledge and skills in new ways. With reference to the application of Mathematics, children are shown how Mathematics impacts on our daily lives.

Aspire, Flourish and Shine: With a foundation in conceptual understanding and rigorous practice to ensure fluency, children are empowered to both achieve well and celebrate their accomplishments, giving them the

The aims of our Mathematics curriculum and teaching align with the national curriculum's aims which are listed below.

Aims of the Mathematics Curriculum

The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions

Throughout our school, we use a Mastery approach which the NCETM defines in the following way

"Mastering maths means pupils acquiring a deep, long-term, secure and adaptable understanding of the subject."

We believe all children should be given the opportunity to master arithmetic and reasoning through high-quality whole class teaching, purposeful practice and timely interventions where appropriate.

We believe that the concrete-pictorial-abstract progression is appropriate for all ages and is used for the securing of new concepts from Early Years to Year 6.

The Early Years Foundation Stage

Mathematics in Early Years is based upon the Foundation Stage Profile strand of Mathematics including both Number and Patterns.

We ensure excellent outcomes for children in Early Years by

- Teaching daily short Mathematics lessons.
- Using White Rose Foundation Stage resources as a starting point for teacher-led sessions.
- Providing a number, shape and pattern rich environment
- Providing specific resources within continuous provision to allow children to develop specific knowledge and skills.
- Providing open-ended opportunities for children to use and apply their Mathematical knowledge and skills in a more explorative, child-led way.
- Responding to children's interests, questions and ideas to develop further areas of Mathematical knowledge and understanding both in guided sessions and in continuous provision
- Providing 1:1 or small group interventions as appropriate to support children in keeping up.
- Using professional judgment and working with the SENDCO to enable early identification of any barriers to learning and therefore ensure children receive appropriate support.

Key Stage 1 and Key Stage 2

Mathematics in Key Stages 1 and 2 is based upon the National Curriculum.

We ensure excellent outcomes for children in Key Stages 1 and 2 by

- Teaching daily lessons usually 60 minutes in length
- Teaching mostly in whole-class sessions with opportunities for children to discuss and explore with peers.
- Teaching in single-year classes (not mixed) by investing in an extra teacher
- Using the Oak National Academy Scheme and resources to support small-step teaching and progress
- Prioritising instant feedback in accordance with our Marking and Feedback policy
- Making appropriate adjustments within lessons to support children with SEND

- Supplementing 'Oak National Academy' resources appropriately to support keep up for any children at risk of falling behind their peers and to provide stretch & challenge. One such resource for KS2 is LBQ.
- Using teaching assistants effectively to support 1:1, small groups or whole classes.
- Timetabling additional arithmetic and fluency sessions in the week to provide further practice and consolidation opportunities.
- Ensuring topics that are not currently being taught in the main lesson are frequently revisited to keep knowledge current.
- Setting homework to support links between home and school learning. Homework includes selected page(s) from Mathematics homework book and fluency practice online through Numbots and TTRS. Where children are unable to access online resources, alternative provision is made.

Mathematics Lessons

- are…Highly focused on the specific small step(s)
- are…Explicitly placed within the learning unit and the long-term learning journey
- include…regular interchange between concrete/contextual ideas, pictorial representations and their abstract/symbolic representations.

Mathematics Learning Environment & Resources

- Working Walls
    - Are used in two ways during lessons
        - As part of the whole class teaching, being referenced by the teacher. Elements of the working wall may be created during the lesson.
        - When working independently, children use it as a tool to remember processes, concepts and/or vocabulary.
    - Are kept minimal and clear so that they are a useful tool for children.
    - Include: unit title, end points of the unit, worked examples and/or representations of the concept, vocabulary linked to the unit.
- Mathematics Toolkits
    - Are accessible to every child in every Mathematics lesson.
    - Include a variety of manipulatives and resources which children are taught to use and can then use independently when appropriate with the aim that children move from concrete to pictorial to abstract.
    - From Y2 to Y6 pupils have their own mathematics vocabulary and key fact keyrings to be used independently as a support or to aid practice.
- Mathematics Exercise Books
    - Mathematics exercise books are used to practice, consolidate and extend learning. This includes further practice of the main body of learning, recall of prior learning for fluency or extension challenges particularly focused on reasoning and problem solving.
    - In Years 4, 5 and 6, Mathematics exercise books include an exemplar of formal written methods for multiplication as an independent source for reference and practice.

Assessment

In the Early Years, assessment is made by teacher questioning and observation on a continuous basis.

In KS1 & KS2 we assess children's work in mathematics from three aspects (short-term, medium-term and long term).

- Short-term assessments

Through analysis of children's work in books and through questioning which we use to help us adjust our daily plans.

- Medium-term assessments

At least three weeks after the completion of a unit, we use a topic test to measure recall and identify areas that are not secure in the long-term memory.

- Long-term assessments

At the end of each full term through formal written tests. The purpose of these is to help track children's progress against year group expectations. It is a further tool to ensure that all children are achieving and progressing well and those who are not are identified and supported. We use the optional national tests for children in Year 2 and the national tests for Year 6 in the Summer Term.

Inclusion

All children have a right to an excellent Mathematical education. Teachers provide quality-first teaching in each lesson. Some children may need minor specific adjustments or extra support in order to achieve at age-related expectations. As outlined above, this may be through additional keep up sessions or enhanced support during lessons. Some children may need significant specific adjustments such as a differentiated curriculum or more intensive adult support. This will be identified early and discussed with SENDCO, Maths Lead, Phase Lead as appropriate. The aim is always that children can access their learning as independently as possible.

Monitoring and Review

Monitoring of the standards and quality of teaching in mathematics is the responsibility of the Mathematics subject leader. Monitoring is undertaken through pupil discussions, review of children's work in books and learning explorations. Teachers receive feedback in a timely manner and SLT are kept informed of standards. Governors are kept informed of standards through curriculum meetings and pupil voice sessions.