

Maths Curriculum Intent

Vision

Our curriculum at Lockerley Primary School encompasses the following aims to meet the needs of our children and the Maths curriculum is vehicle to bring these aims to life:

Aims of our curriculum

- **ACTIVE - Provide richness and depth to inspirational learning in school**

Concrete, Pictorial and Abstract is used to embed conceptual understanding in the Maths curriculum to allow pupils to make links between each area of learning.

- **EXPERIENCES - Provide a breadth of opportunity out of school whilst rooting children in their immediate and local environment**

Reasoning opportunities provide the foundations for thinking and learning. Children show their workings out in a multi-representational way to prove their understanding.

- **DIVERSITY - Build cultural awareness & knowledge to encourage children to be outward looking and forward thinking**

Teaching across domains deeply rooted in problem solving allows children to see the links in their learning whilst also providing for both breadth and depth to the children's Maths.

- **PURPOSE - We believe learning should matter**

Making meaningful learning is central to our teaching. Learning journeys are made clear to the children with an outcome we are working towards and the steps along the way.

Implementation

EYFS, Year 1 and 2

KeyStage 1 maths learning uses Mastering Number from NCETM (National Centre for Excellence in the Teaching of Mathematics) it aims to secure firm foundations in the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number. Attention will be given to key knowledge and understanding needed in Reception classes, and progression through KS1 to support success in the future. The provision includes individual and small group work, and a balance between guided interaction with direct teaching and child-led activities. Objective led planning allows the teachers to tailor individual next steps, based on assessments, into the environment and play-based activities for the children. Small group work is used to target particular needs, such as number recognition. Early intervention is also used 1:1 with a child if they have been identified as not keeping up.

Mathematical language is incorporated into the environment, for example capacity language is around the water tray and sand tray to prompt conversations. Digits are used to order resources and as part of play. Photos of children are incorporated into the maths environment to represent the value of digits to be memorable for the children. There is a maths challenge area in the class, which children are self-directed to. Children will be directed to enhanced maths provision depending on their next step alongside teacher guided activities.

Y3-6

Maths is taught daily and supplemented with discrete mental maths sessions. Teachers plan from the National Curriculum objectives alongside the NCETM (National Centre for Excellence in the Teaching of Mathematics). Each year group has a long term plan which outlines the learning journeys to be covered referring to the spines in the Curriculum Prioritisation Model. This is a small step learning approach where lesson design links to prior learning to ensure all can access the new learning and identifies carefully sequenced steps in progression to build secure understanding. Examples, representations and models are carefully selected to expose the structure of mathematical concepts and emphasise connections, enabling pupils to develop a deep knowledge of mathematics.

Procedural fluency and conceptual understanding are developed in tandem because each supports the development of the other. It is recognised that practice is a vital part of learning, but the practice must be designed to both reinforce pupils' procedural fluency and develop their conceptual understanding.

Pupils are taught through whole-class interactive teaching, enabling all to master the concepts necessary for the next part of the curriculum sequence. As we have mixed year groups, teaching staff plan for the specific objective for the year group and adapt teaching input where necessary. In a typical lesson, the teacher leads back and forth interaction, including questioning, short tasks, explanation, demonstration, and discussion, enabling pupils to think, reason and apply their knowledge to solve problems. Use of precise mathematical language enables all pupils to communicate their reasoning and thinking effectively. If a pupil fails to grasp a concept or procedure, this is identified quickly, and gaps in understanding are addressed systematically to prevent them falling behind. Significant time is spent developing deep understanding of the key ideas that are needed to underpin future learning. Key number facts are learnt to automaticity, and other key mathematical facts are learned deeply and practised regularly, to avoid cognitive overload in working memory and enable pupils to focus on new learning.

Behind all Mastering Number and NCETM are the Five Big Ideas in Teaching for Mastery.

In each classroom there is a maths learning wall. On the wall there is a WAGOLL or problem we are aiming to solve by the end for each year group. This will incorporate all the skills they will be learning within the unit. Each step is then displayed on the wall towards the final goal. Therefore children are able to understand how one lesson builds on another within the journey.

Mathematical language is modelled in each class with key vocabulary displayed on the working wall. Teachers model the use of this language in their teaching. Stem sentences are used to support the use of language to answer reasoning questions for example 'I know the shape is divided in ____ because ____'

Reasoning opportunities are central to our maths teaching. It is woven into all the learning through 'prove it' questions, 'explain how...' or 'honesty answers'. In every class the children are encouraged to use resources to support and deepen their learning. From YR to Y6 there are maths resources out in each lesson. When teachers model mathematical strategies they use concrete, pictorial and abstract strategies alongside each other. Children will also show their answers to problems in multi-representational ways to prove their deep understanding and check their answers.

Fluency is developed through additional mental maths sessions. Within these sessions, teachers teach strategies to help children calculate using the most efficient method. We have also invested in 'Times Tables Rockstars' which the children use at home and school. The teachers are able to track the children's progress through the programme and set challenges. Times Table challenges are used weekly to track the children's attainment and this is tracked by staff. For UKS2 the children have access to Match.co.uk for both fluency and home use.

Assessment

Assessments are made by the teachers continuously and used to plan subsequent lessons. SeeSaw is used within all year groups to record observations and assessments. Live marking within lessons drive immediate feedback and adaptations to learning. If feedback is given after the lesson, children are expected to respond to the marking the following session. Teachers track individual progress on assessment sheets. These help the identification of gaps in learning and potential pre-teach groups when the learning is revisited in the next phase. Data drops happen 3 times a year and are reported to parents through report cards and parent consultations.

Teaching for Mastery

Five Big Ideas

