

St Luke's CE (VC) Primary School 'Mathematics Statement of Intent.'

Intent

The intent of our mathematics curriculum at St Luke's Primary School is to design a curriculum, which is accessible to all and will maximise the development of every child's ability and academic achievement. We deliver lessons that are creative and engaging as we want children to make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. Maths is a journey and long-term goal, achieved through exploration, clarification, practice and application over time. At each stage of learning, children should be able to demonstrate a deep, conceptual understanding of the topic and be able to build on this over time. There are 3 levels of learning:

- **Shallow learning:** surface, temporary, often lost
- **Deep learning:** it sticks, can be recalled and used
- **Deepest learning:** can be transferred and applied in different contexts

The deep and deepest levels are what we are aiming for by teaching maths using the Mastery approach.

The children at St Luke's Primary School will develop the necessary skills to make them "deep thinkers" by acquiring maths skills that can be recalled quickly, transferred and applied in different contexts. We intend for our pupils at St Luke's Primary School to be able to apply their mathematical knowledge to all other subjects. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

Implementation

At St Luke's CofE (VC) Primary School, children study mathematics daily covering a broad and balanced mathematical curriculum. The lesson is split into six parts and supports the children in a deep learning process. The children are encouraged and supported through a 'talk task' before moving onto an independent activity. Alongside daily maths sessions an additional 15 minutes a day is spent focusing on a 'Maths meeting' which develops fluency, precision and recall of mathematical facts.

Objects, pictures, words, numbers and symbols are everywhere. The mastery approach incorporates all of these to help children explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding. Together, these elements help cement knowledge so pupils truly understand what they've learnt.

All pupils, when introduced to a key new concept, should have the opportunity to build competency in this topic by taking this approach.

Pupils are encouraged to physically represent mathematical concepts. Objects and pictures are used to demonstrate and visualise abstract ideas, alongside numbers and symbols.

Concrete – children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.

Pictorial – children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.

Abstract – With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.

In the Early Years Foundation Stage (EYFS), we relate the mathematical aspects of the children's work to the Development Matters statements and the Early Learning Goals (ELG), as set out in the EYFS profile document. Mathematics development involves providing children with opportunities to practise and improve their skills in counting, numbers, calculating simple addition and subtraction problems, to describe shapes, spaces and measures. The profile for Mathematics areas of learning are Number (ELG 11) and shape, space and measures (ELG 12). We continually observe and assess children against these areas using their age-related objectives, and plan the next steps in their mathematical development through a topic-based curriculum. There are opportunities for children to encounter Maths throughout the EYFS (both inside and outside) – through both planned activities and the self-selection of easily accessible quality maths resources. Whenever possible children's interests are used to support delivering the mathematics curriculum.

Due to the interconnected nature of mathematics, at St Luke's CofE (VC) Primary School, we aim to teach maths in a cross curricular manner as well as discretely to teach the practical application of mathematical skills. We focus not only on the mathematical methods but also focus on mathematical vocabulary to broaden and deepen mathematical understanding.

We aim for each child at St Luke's CofE (VC) Primary School to be confident in each yearly objective and develop their ability to use this knowledge to develop a greater depth understanding to solve varied fluency problems as well as problem solving and reasoning questions. We use a range of online resources throughout the school to ensure a curriculum that is specific to each child's learning needs. Children in Year 1 to Year 6 complete their homework activities using the online homework resource My Maths, which aims to build pupil engagement and consolidate maths knowledge.

From the 2019/20 academic year onwards, schools in England will be required to administer an online multiplication tables check (MTC) to year 4 pupils. The purpose of the MTC is to determine whether pupils can recall their times tables fluently, which is essential for future success in mathematics. It will help schools to identify pupils who have not yet mastered their times tables, so that additional support can be provided. To support the children with their multiplication practice we conduct a daily multiplication recall and use 'Times

Table Rockstars' as an online and fun learning platform which also offer resources to be used in the classroom.

Impact

Our practical approach to mathematics ensures that we meet the needs of all of our children at St Luke's CofE (VC) Primary School. Our focus on fluency, reasoning and problem solving provides challenging learning as well as opportunities to contextualise mathematics and encourage children to not see mathematical skills in isolation, but to integrate them into other aspects of their learning and lives. We are supporting children to develop in confidence, improve mathematical resilience, be reflective and be interested in exploring learning.

We measure our impact of our curriculum through the following methods:

- A reflection on standards achieved against the planned outcomes;
- Termly assessment Progress in Understanding Mathematics Assessment (PUMA) which is a suite of termly standardised maths tests which enable school to track progress, predict future performance and benchmark against national averages;
- Pupil discussions about their learning