



Muxton Primary School

Mathematics Curriculum

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. At Muxton Primary School, mathematics education provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

Aims

We aim to ensure that all children:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- **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.

At Muxton, Mathematics is an interconnected subject in which children need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but children should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They will also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of children will move through the programmes of study at broadly the same pace. However, decisions about when to progress will always be based on the security of children's understanding and their readiness to progress to the next stage. Children who grasp concepts rapidly will be challenged through being offered rich and sophisticated problems before any acceleration through



new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Information and communication technology (ICT)

Calculators should not be used as a substitute for good written and mental arithmetic. They will therefore only be introduced near the end of key stage 2 to support children’s conceptual understanding and exploration of more complex number problems, if written and mental arithmetic are secure.

Spoken language

The national curriculum for mathematics reflects the importance of spoken language in children’s development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that children hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. Therefore children at Muxton will be taught how to make their thinking clear to themselves as well as others and discussion to probe and remedy their misconceptions will be used to ensure that children build secure foundations.





