

Mastery

At Old Buckenham we share the belief that 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. A high-quality mathematics education therefore 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

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

Become **fluent** in the fundamentals of mathematics, including the varied and regular practice of increasingly complex problems over time.

Reason mathematically by following a line of enquiry, understanding relationships and generalisations, and developing an argument, justification or proof using mathematical language.

Can **solve problems** by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

At Old Buckenham we have developed a Mathematics curriculum that has high expectations for every child, spends more time on fewer topics and focuses teaching on using maths principles to problem-solve. We want all children to acquire mastery of mathematics i.e. **a deep, long-term, secure and adaptable understanding of the subject.**

The expectation is that the majority of pupils 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 pupils' understanding and their readiness to progress to the next stage. Pupils 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 will consolidate their understanding, including additional practice, before moving on.

Mastery is not just being able to memorise key facts and procedures and answer test questions accurately and quickly. It involves knowing 'why' as well as knowing 'that' and knowing 'how'. It means being able to use one's knowledge appropriately, flexibly and creatively and to apply it in new and unfamiliar situations.

A pupil really understands, or masters, a mathematical concept or idea if he or she can:

- describe it in his or her own words;
- represent it in a variety of ways (e.g. using concrete materials, pictures and symbols – the CPA approach)
- reason, explain, prove or justify it to someone else;
- make up his or her own examples of it;
- see connections between it and other facts or ideas;
- recognise and use it in new situations and contexts.