



## Our vision for Mathematics at Lister

Mathematical literacy underpins our understanding of the world. It allows us to solve problems, create models to understand situations and develop our logic and reasoning. Proficiency in maths enables proficiency in other subjects and disciplines, from physics to food preparation, geography to economics. Throughout the mathematics lessons at Lister problem solving is a fundamental part of how we use and develop mathematics skills, the UKMT is an important vehicle for this problem solving aspect.

### What do we teach in KS3 mathematics?

The students in KS3 follow a Mastery curriculum. This curriculum is based on three main principles:

**Deep Understanding** - The development of a deep understanding of the concepts rather than learning rules. This means that students will be able to explain why they are doing things and not just follow a set of rules.

**Mathematical Thinking** - Students develop thinking in and out of the classroom; they are able to see links with their Maths in other subjects as well as links to the real world. Throughout the lower school lessons, problem solving is a strand that runs through all the lessons.

**Mathematical Language** - We want students to develop precise mathematical language throughout their Maths learning. Students are encouraged to stand up to answer questions; in full sentences using precise mathematical language and to give reasons for their answers.

### What do we teach in Key Stage 4 mathematics?

The KS4 curriculum builds on the deep understanding developed at KS3 and broadens the curriculum covered. In Year 10 and 11 students will cover Number, Algebra, Shape, Ratio and proportion and Probability and Statistics. We support students to develop their higher order thinking skills such as thinking and working logically, analysing and solving problems as well as evaluating different methods to use the most efficient and effective. These skills can only be developed when problem solving is at the centre of the curriculum.

### PSHCE/ SMSC links:

A strong mathematics education enables students to protect themselves from misinformation, increase their probability of employment in a variety of fields and navigate the financial decisions of adult life effectively. It helps students to develop skills to become functioning and successful members of society.

At Lister we take time to recognise the diversity of backgrounds of the thinkers who have contributed to our understanding of mathematics today.