

# MATHS

### **Statement of Intent: why do we teach what we teach?**

At LSA our intention in Mathematics is to provide opportunities for every child to enjoy learning, experience success and be equipped for life beyond the classroom. We are determined to maximize both the progress and attainment of all our students. We believe in 'Challenge for all' and we aim to promote independence and a love of learning.

At LSA we study Mathematics because it is an essential key life skill in its own right, but also because it is a vital tool needed in other areas of the curriculum and in numerous careers. We aim to stimulate students' curiosity, interest and enjoyment in the beauty and logic of Mathematics. We endeavour to provide opportunities for students to develop transferable Mathematical skills which will also aid their progress across other areas of the curriculum. The skills and knowledge we cover will help to prepare our students for their everyday lives beyond LSA and their future employability.

At LSA we enrich our curriculum by encouraging students to participate in internal, local and National Mathematics competitions. We strive to enhance students' Cultural capital by making them aware of where the Mathematics comes from, through Mathematicians and the etymology of technical vocabulary.

### **Implementation: how do we teach what we teach?**

At LSA the key principal is that we follow a 5 year spiral curriculum where skills are reviewed and then extended in future teaching, building upon topics taught previously. Topics are logically sequenced to extend prior knowledge and allow for skills to be interleaved within later topics.

In line with the Key Stage 3 National Curriculum, students will be given opportunities to reason mathematically, solve problems and become fluent with facts. Teachers will promote oracy skills so that students are able to think, speak and write with purpose and confidence.

We ensure the level of challenge is high enough for the most able, with scaffold and support available for students who need it.

- Concepts are broken down into small structured steps enabling application to range of contexts
- Procedural fluency is developed through regular retrieval homework
- Manipulatives and multiple representations are used to build and scaffold learning
- Feedback is used in lessons to address misconceptions promptly
- Students are encouraged see errors as a learning opportunities
- Students learn in a non-judgmental environment where taking risks in learning is encouraged
- Students develop their resilience and independence when faced with unfamiliar problems, so that they can transfer these skills across other subjects at LSA and beyond
- Students are encouraged to reason mathematically, develop structured justifications to solutions using the correct technical vocabulary

### **Impact: how do we know what students have learnt and how well they have learnt it?**

The impact of our Mathematics curriculum can be seen through the analysis of the school GCSE results. The Mathematics department consistently achieves highly in progress 8 measures across the school.

Assessments are sat regularly (every 4 topics of work) in class to support knowledge retrieval and encourage students to reflect upon their progress and revision strategies. This data is regularly analysed and used to inform future teaching and to plan for timely interventions.

Departmental Quality Assurance shows students taking pride in their work in Mathematics, and they enjoy the level of challenge and variety of learning activities.