

## Curriculum Intent Statement

### Maths

**“Underpinning any maths curriculum should be a desire to develop passionate mathematicians who can see the beauty of the subject and wish to study it at a higher level.”**

#### Department Intent Statement

The purpose of Mathematics is to develop fluent knowledge, skills and understanding of key skills and concepts in order to apply these confidently, not only in mathematical contexts, but also across other areas of the curriculum, in further education and in employment.

Mathematics is a highly interconnected subject that is constantly building on prior knowledge and understanding to further develop skills. The intent of the curriculum is to ensure that students can identify and apply these connections in order to make more mathematical skills accessible to all. The core values of the curriculum are to develop **fluency, reasoning and problem solving** across all areas of maths. In doing this, students will establish transferable skills which they will use during key stages 3 and 4 and will empower them for further education and gainful employment.

Across the five years students will study and evolve skills in

- **Number**
- **Algebra**
- **Ratio, proportion and rates of change**
- **Geometry and measures**
- **Probability**
- **Statistics**

In year 7 the focus will be to consolidate and further embed the skills learned at KS2 and also, for those whom these are well established, provide a greater focus accelerating learning in areas that have not yet been studied. This will allow students to have a broader understanding of the links between topics and have a greater wealth of knowledge earlier in their school life. Algebra, for example, is not a focus at KS2 but accounts for one of the highest proportion of marks on both higher and foundation tier exams at GCSE. Dedicating more time to this in year 7 and building on prior knowledge of other topics will provide a firm foundation on which to progress in further years.

Across years 8 to 10, students will continue to expand their knowledge and understanding across all areas of mathematics with allocated time linked to, although not dictated by, the weightings of marks at GCSE. Through a focus on fluency, reasoning and problem solving, they will learn to identify what is required in a given problem or question, select the correct skill set and apply this to find a solution. Students will be able to reason mathematically, make deductions and draw conclusions. They will also improve their communication skills by being given opportunities to actively listen and share their thoughts through oral, written and non-verbal communication.

In year 11, once all new content has been taught, this may be dependent on the class, learning will be guided by question level analysis from Mock Exams and weekly exam papers so as to provide a more prescriptive curriculum for each student and class. Each class teacher will carefully analyse the gaps in students knowledge and design lessons to close these gaps and test them using GCSE style exam questions.

Across all years there will be a focus on ensuring that work is differentiated to meet the needs of SEND and PP students. A focus on key words and literacy will underpin all new learning and consolidation to ensure that this does not disadvantage those students who have difficulties with this. In later years with the focus being more on GCSE exam questions the use of pictures and highlighting of key words will be used to break down questions and make them more accessible to all students.

Throughout the curriculum, from year 7 the topics that build to A-level skills will be identified to students and reinforced both throughout the scheme of learning and in the classroom.

A qualification in mathematics gives access to further education, level 3 courses and careers in science, technology and engineering, as well as being used in wider employment. Specific level 3 courses that require a high level of maths ability are science subjects, psychology, economics, maths and further maths.