

KS3 Mathematics Curriculum Overview

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Curriculum Intent

Throughout Y7, Y8 and Y9, we build confidence in mathematical reasoning, an essential skill for every pupil's future. Our curriculum ensures that all pupils develop the fluency, reasoning and problem-solving skills needed not only to excel in assessments, but to pursue their ambitions beyond school.

We motivate, challenge and inspire a very able cohort, while also supporting and nurturing pupils who lack confidence or find Mathematics difficult. Our aim is to deliver a curriculum that enables every pupil to achieve the best they can.

Core Knowledge

Topics:

Guided by the KS4 National Curriculum and the Pearson **Sparx Learning Curriculum**, pupils study:

- Number
- Algebra
- Ratio, Proportion and Rates of Change
- Geometry and Measures
- Probability
- Statistics

Each assessment covers a mixture of all of these areas – both important topics taught in previous years, and those that have been recently taught.

Procedural Knowledge

Pupils Will:

Become fluent in the basics of mathematics

Be able to reason how and why the mathematics works (or doesn't sometimes)

Be able to apply their mathematics to solve problems which are both abstract and from the real world

Apply mathematical knowledge in Science, Geography, Computer Science and other subjects.

Develop confidence in using mathematical language and notation accurately

Make connections between different areas of mathematics

Think logically and systematically when tackling problems

Communicate mathematical ideas clearly, both verbally and in writing

Use diagrams, tables and graphs effectively to represent information

Understand the importance of mathematics in everyday life and future careers

Build a strong foundation for further study at GCSE and beyond

Homework

Weekly homework is set using Sparx. The main focus of tasks is to review skills taught approx. 2 weeks prior, over time the system adapts to the level and needs of each individual student; to provide targeted long-term consolidation.

Assessment

Year 7

- An initial Baseline Assessment, which covers KS2 mathematics content, to establish each pupil's ability as they Join Forge.
- Two Formative Assessments (one in Half Term 2 and the other in Half Term 4); where pupils are assessment on topics covered so far in Y7.
- A Final summative assessment at the end of the year, to measure progress of each pupil in Y7, ready for their progression into Y8.

Year 8

- There are two main formative assessments during Year 8, assessing the skills taught and the student's ability to apply the skills to problem solving.

Year 9

- There are two main formative assessments during Year 9, assessing the skills taught and the student's ability to apply the skills to problem solving.

Ongoing Assessment

Assessment for learning takes place in every lesson to ensure teaching is responsive to pupil needs.

Links to Personal Development

- Mathematical problem-solving builds resilience and encourages pupils to learn from mistakes.
- Real-world applications are used wherever possible.
- Cross-curricular links are made with Science, Technology, Geography, Food and other subjects.
- Strong mathematical outcomes support wider career choices and future pathways.

Progression to Key Stage 4

The KS3 Mathematics curriculum builds a strong foundation of fluency, reasoning and problem-solving skills that prepare students for the increased depth and rigour of KS4. It helps students become confident, work independently, and apply their knowledge to more complex problems.