

Mathematics

Curriculum Intent

Mathematics is vital in everyday life. Our aim is to improve students' understanding of and the use of Mathematics both in their school journey and throughout their lifetime.

Students are encouraged to develop a love of mathematics, an eagerness to tackle challenges, and the passion to go on and pursue the subject beyond GCSE, if needed. Students are both supported and challenged in the mathematics classroom so that they can achieve and grow their mathematical skills with confidence. The essential learning of Mathematics at GCSE is a pre-requisite for many follow-on courses at college or school, and also for most careers, including apprenticeships.

Mathematics teaching is closely aligned with Carnforth High School values: *Confidence, Purpose and Respect*.

We follow the White Rose scheme of learning. This provides an ambitious and challenging curriculum whilst ensuring no child gets left behind. We aim to foster confidence in using mathematical methods and skill so that all students have the necessary 'toolkit' to tackle everything from everyday financial problems to more complex algebraic concepts.

Our five-year curriculum programme enables students to continuously build on prior learning, with frequent knowledge checks to aid recall and bolster mastery. Each topic follows a series of carefully sequenced steps to allow students to develop links between topics, improve retention, develop fluency, and solve problems in a variety of contexts.

Whatever level students are working at, we aim to develop understanding of the important role that mathematics plays in all types of jobs and careers and how, with persistence and perseverance, everyone can become confident mathematicians and problem solvers to secure their best potential in life.

Implementation

KS3 & KS4

Our five-year programme consists of planned units of topic that develop and build year-on-year. Units are carefully sequenced to develop and build mathematical ideas from previously taught units. We advance skills and knowledge in the following areas of the National Curriculum:

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

Sparx Maths is used as part of our regular independent home learning practise. The programme develops routine and rigour for practising and fine-tuning mathematical mastery and expertise. Sparx is an 'intelligent homework' application so works at the individual level of each student. Written working out is a key success factor for progress, as is the achievement of 100% completion. Supportive teaching videos and in-school teacher-led support are also a pre-requisite to success. Our teachers are always on hand to help students achieve their weekly target.

Whatever level each student is working at, we check knowledge and understanding before each new unit to establish a starting point for development of knowledge and ideas for new topics. Recall, application, developing fluidity and mastery are at the heart of our lessons.

Our teachers use adaptive teaching to ensure those students with support or challenge needs are met.

Impact

Assessment

Frequent topic tests (about every 2 weeks) assess progress to date and provide a further opportunity to re-learn, improve or develop deeper understanding of key topics. Instructional feedback helps students to hone assessment technique and apply knowledge in unfamiliar settings. We encourage students to self-reflect on their own revision techniques and develop independent learning skills to become competent and confident learners.

Each year group also has a more in-depth assessment of progress with termly assessments. Again, students are encouraged to approach these with maturity and confidence.

KS4

At GCSE, we follow the Edexcel Examination Board assessment which comprises.

Edexcel GCSE Mathematics – 1MA1	Weighting	Assessment	When
Paper 1 - Non calculator	80 marks	Equally weighted exams sat either at Foundation or Higher tier. All exams are 1 hour 30 minutes.	Year 11
Paper 2 - Calculator	80 marks		Year 11
Paper 3 - Calculator	80 marks		Year 11

Students sit a full exam series at the end of Year 10 to help best prepare them for their final year. Two further mock examination weeks are held in Nov and Feb of Year 11.

As students embark on their Year 11 journey, they are supported in their revision with tailored revision planners, depending on whether they are sitting the Foundation or Higher Tiers.

Higher Tier entries will grade from Level 3 to Level 9, with more focus on the higher mathematical skills and content.

Foundation Tier entry will grade from Level 1 to Level 5, without the more complex higher content topics and skills.

Department

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