

Curriculum Overview

Subject: MATHEMATICS

Year Group: 10

Year 10 GCSE Mathematics builds upon the mathematical skills developed through Key Stage 3. Pupils will cover five topic areas: number, algebra, statistics and probability, geometry and measure, and, ratio, proportion and rates of change. They will be presented in lessons with AO1 – using and applying standard techniques, AO2 – reasoning, interpreting and communicating mathematically, and AO3 – solving problems in mathematics and in other contexts. During term 1 and 2 pupils will all study the same topics and during term 3 will follow either a higher or foundation pathway into Year 11, in preparation for their GCSE examinations in the summer.

TERM 1		TERM 2		TERM 3	
<u>AUTUMN 1</u>	<u>AUTUMN 2</u>	<u>SPRING 1</u>	<u>SPRING 2</u>	<u>SUMMER 1</u>	<u>SUMMER 2</u>
Percentages Surface Area and Volume Simultaneous Equations	Simultaneous Equations Formulae Trigonometry Constructions	Linear Graphs Real-life Graphs Set Notation Tree Diagrams	Tree Diagrams Compound Measures Ratio Graphs	Sequences Handling Data Proportion Transformations Rounding Indices	Indices Brackets Handling Data and Statistical Diagrams Recurring Decimals
<u>KNOWLEDGE/SKILLS</u> Repeated percentage change Surface area Volume Linear simultaneous equations	<u>KNOWLEDGE/SKILLS</u> Linear simultaneous equations Rearranging formulae Right-angled trigonometry Constructions and loci	<u>KNOWLEDGE/SKILLS</u> Equations of linear graphs Plotting and interpreting real-life graphs Venn diagrams and set notation	<u>KNOWLEDGE/SKILLS</u> Independent and dependent events Density and pressure Working with ratios and algebra Velocity-time graphs Cubic, reciprocal and exponential graphs	<u>KNOWLEDGE/SKILLS</u> Arithmetic and geometric sequences Sampling Direct and inverse proportion Transforming shapes Error intervals Index laws Bounds	<u>KNOWLEDGE/SKILLS</u> Index laws Expanding and factorising brackets Grouped data Drawing and interpreting statistical diagrams Fractions and recurring decimals Cumulative frequency graphs Box plots
<u>KEY ASSESSMENTS</u> Post Knowledge Check Autumn PPE Examinations		<u>KEY ASSESSMENTS</u> Post Knowledge Check Spring PPE Examinations		<u>KEY ASSESSMENTS</u> Post Knowledge Check End of Year Assessment	
<u>External Resources and Extended Studies</u> SPARX Maths - https://sparxmaths.com/ Our main homework platform Mathsbot - https://mathsbot.com/ Differentiated activities to help build key skills as well as worksheets for consolidation of work. Corbett Maths – https://corbettmaths.com 5-a-day questions which are good problem-solving starter questions for all abilities. Maths Genie - https://www.mathsgenie.co.uk/ A free revision site. It has past papers, mark schemes and model answers to GCSE exam questions OnMaths - https://www.onmaths.com/ Another free to use website for exam paper practice			<u>Enrichment and Development</u> Literacy words displayed in the maths corridor to promote key vocabulary used throughout the curriculum. Comprehension tasks scheduled for each half term encompassing literacy, diversity and inclusion, careers and cross-curricular links Careers in maths information displayed in the maths corridor to spark curiosity Diversity and inclusion, and women in maths posters displayed in the corridor to highlight and celebrate important figures in maths Use of SPARX Maths and calculators Year 10 enrichment day trip to Southend University for students aspiring to study maths at A Level		

Curriculum Overview

Subject: MATHEMATICS

Year Group: 11 (25/26)

Year 11 (25/26) GCSE Mathematics builds upon the mathematical skills developed through Year 10 and Key Stage 3. Pupils will cover five topic areas: number, algebra, statistics and probability, geometry and measure, and, ratio, proportion and rates of change. They will be presented in lessons with AO1 – using and applying standard techniques, AO2 – reasoning, interpreting and communicating mathematically, and AO3 – solving problems in mathematics and in other contexts. During term 1 pupils will study the remaining units of their GCSE course and sit Pre-Public Examinations. During term 2 and 3 pupils will follow a bespoke curriculum based on Question Level Analysis from the previous term's PPE examinations; classroom teachers identify gaps in learning and address 'common misconceptions' to maximise attainment.

TERM 1	TERM 2	TERM 3
KNOWLEDGE/SKILLS Higher • More algebra • Vectors and geometrical proof • Proportion and graphs Foundation • Fractions, indices and standard form • Congruence, similarity and vectors • Expanding and simplifying • Factorising linear and quadratic expressions • Rules of Indices	KNOWLEDGE/SKILLS Revision for GCSEs Topics identified from QLA as area for development	KNOWLEDGE/SKILLS Revision for GCSEs Topics identified from QLA as area for development
<u>KEY ASSESSMENTS</u> Half term 1: Post Knowledge Checks GCSE paper sat in class Half term 2: Post Knowledge Checks Autumn PPE Examinations	<u>KEY ASSESSMENTS</u> Half term 1: GCSE paper sat in class Half term 2: GCSE paper sat in class Spring PPE Examinations	<u>KEY ASSESSMENTS</u> Half term 1: GCSE papers sat in class GCSE Examinations – paper 1 Half term 2: GCSE Examinations papers 2 and 3

Extended reading suggestions and external resources:

SPARX Maths - <https://SPARXmaths.uk>

Core website for compulsory homework tasks, also offering revision, times tables practice and targeted work.

Mathsbot - <https://mathsbot.com/>

Differentiated activities to help build key skills as well as worksheets for consolidation of work.

Maths Genie - <https://mathsgenie.co.uk>

Revision resources for KS3 – A-Level, support videos, past GCSE papers and mini tests.

Corbett Maths – <https://corbettmaths.com/>

5-a-day questions which are good problem-solving starter questions for all abilities.

BBC Bitesize - <https://www.bbc.co.uk/bitesize/subjects/z38pycw>