

Year 10 Mathematics

In Year 10 students begin their OCR GCSE. Lessons develop students' mathematical knowledge across the five strands - number, algebra, ratio and proportion, geometry and statistics, as well as build their confidence in problem solving. Students are assessed on key topics throughout the year to encourage revision and retention of information.

Methods of deepening and securing knowledge:

Interleaving	Low-stakes starters are used to ensure knowledge gained at Key Stage 3 is retained and developed.
Challenge and differentiation	In all lessons, teachers use a 'Going for Gold' strategy to differentiate the work. Planning considers students' starting points and looks at possible misconceptions.
Questioning	Teachers give students thinking time when posing questions. Questioning is used to develop thinking/reasoning skills, as well as to identify misconceptions. Variety of retrieval techniques used including cold-calling.
Modelling	Key techniques are modelled clearly with worked examples and explanations of both procedures and principles.

	Autumn term 1	Autumn term 2	Spring term 1
Topic(s)	<p>Higher Level</p> <ul style="list-style-type: none"> • Data collection and sampling. • Organising, presenting and analysing data. • Primes, factors and multiples. • Algebraic manipulation. <p>Foundation Level</p> <ul style="list-style-type: none"> • Data collection and sampling. • Organising, presenting and analysing data. • Primes, factors and multiples. • Algebraic manipulation. 	<p>Higher Level</p> <ul style="list-style-type: none"> • Accuracy and bounds. • Circles, spheres and pyramids. • Pythagoras' Theorem and trigonometry. • Proofs and formulae. <p>Foundation Level</p> <ul style="list-style-type: none"> • Accuracy and rounding. • Mensuration. • Proofs and formulae. 	<p>Higher Level</p> <ul style="list-style-type: none"> • Construction and loci. • Geometric proofs. • Direct and inverse proportion. • Percentage change. <p>Foundation Level</p> <ul style="list-style-type: none"> • Geometric constructions and calculations. • Direct and inverse proportions. • Percentage change.
Assessment	End of module assessments.	End of module assessments.	End of module assessments.

CEIAG (Careers that are linked to that topic)	All	All	All
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	Spring term 2	Summer term 1	Summer term 2
Topic(s)	<p>Higher Level</p> <ul style="list-style-type: none"> Graphical solutions of equations. Algebraic solutions of equations. Fractions and decimals. Bivariate data. <p>Foundation Level</p> <ul style="list-style-type: none"> Solving of equations. Fractions and decimals. Bivariate data. 	<p>Higher Level</p> <ul style="list-style-type: none"> Standard form. Surds. Inequalities. <p>Foundation Level</p> <ul style="list-style-type: none"> Indices and standard form. Exact calculations. Equations and inequalities. 	<p>Higher Level</p> <ul style="list-style-type: none"> Compound units. 2D and 3D representations. Trigonometry. <p>Foundation Level</p> <ul style="list-style-type: none"> Compound units. 2D and 3D representations.
Assessment	End of module assessments.	End of module assessments.	End of module assessments. End of year exam.
CEIAG (Careers that are linked to that topic)	All	All	All

Independent Study

Independent study set once per week using Hegarty Maths. One investigation per term.